

# 7

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## Space Criteria: A Guide to the Guides

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## 7 - 1

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# Using This Chapter

This Guide to the Guides provides a reference catalog of space and relationships criteria for the facility types to be considered for inclusion in Community Activity Centers. It includes the facility types listed in Section 3 - 8, "Religious, Welfare, and Recreation Facilities", of DOD 4270.1-M, *Construction Criteria Manual*. This list is summarized in Table 3 - 2 of this Design Guide.

For all these facilities, this chapter provides the DOD Space Authorizations from the Construction Criteria Manual. For those care facilities underlined in Table 3 - 2, it also excerpts critical space criteria from available Design Guides and Technical Manuals. This information includes:

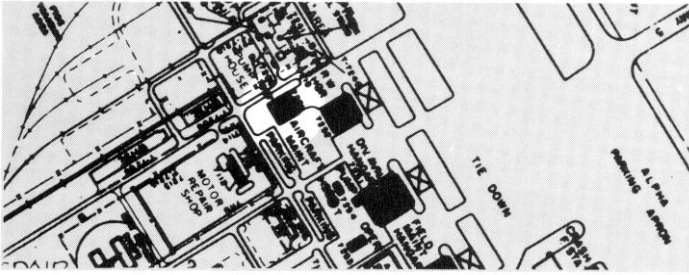
- Summary of functions and activities of the overall facility.
- Summary of recommended space allocations for the facility.
- Individual space criteria for component major functional areas, including descriptions, recommended space allocations and relationships.

This Guide to the Guides is intended for use in planning, overall programming, and initial design of community facility systems and Community Activity Centers. The information has been collected and summarized for the convenience of MSA and other community program staff, engineers, architects and planners. For detailed programming and design of the facilities or functional components of Community Activity Centers, and for more complete and current information sources, users should

see the referenced Design Guides for the individual facility-types. For Community Framework planning, this chapter provides an introduction to the functions associated with each facility in order to determine which programs and facilities should be included in community planning. It also provides a preliminary understanding of the component functional areas, space requirements and relationships which influence decisions on agency responsibilities and relationships, patterns of service distribution and coordination, and space program and location requirements (see Chapter 3). For individual project development, the summary criteria provides support for preliminary programming and preliminary design of the individual community and morale support facilities, their relationships and overlaps (see Chapters 4 and 5 for application).

The information in this chapter has been excerpted directly or summarized from the DOD *Construction Criteria Manual*, individual facility Design Guides and Technical Manuals. Discrepancies may exist between these source documents. In particular, differing definitions of military population as a space criteria basis may be confusing. Space figures in this chapter may also appear different from figures in the referenced Design Guides, because any figures which are listed in net square feet have been converted to gross square feet. For a more detailed explanation, footnoting of the numbers and other criteria, and their application, see the appropriate sections of the *DOD Construction Criteria Manual* and facility Design Guides. Individual Guides are referenced at the beginning of sections where they apply.

The data from DOD 4270.1-M are based on the edition dated June 1, 1978. This is subject to change. Consult the current DOD 4270.1-M to determine if data are still applicable for specific categories.



## 7 - 2

### Aero Club Facilities

Table 7 - 1 DOD Space Authorization for Aero Club Facilities

Aircraft	Area (Gross SF)	
	Hangar Space	Multipurpose Space
1	900	500
2 - 5	2,300	1,000
6 - 10	3,800	1,200
11 - 15	5,300	1,500

An Armed Forces Aero Club is a recreational flying activity located on or near military installations, used by authorized personnel and approved by the Military Department concerned. The Aero Club space allowances shown in table 7 - 1 are intended to provide hangar space and aircraft storage during inclement weather, and to provide multipurpose space for administrative, training, classrooms, operations, scheduling safety meetings, and flight planning. Space requirements are based on the number of aircraft operated by the club.



## 7 - 3

### Arts and Crafts Centers DG 1110-3-124

The Arts and Crafts Program consists of fine arts and multiple fine crafts. Additionally, it includes the constructive use of tools and materials, and the application of technical knowledge. Activities are planned for both beginner and professional to stimulate new interests and develop skills. Informal instruction is provided for individuals, and regularly scheduled classes are held for groups. Members of the program are encouraged to share their accomplishments with the civilian community through open-house activities and off-post exhibitions, workshops, fairs and similar activities.

At least seven basic arts and crafts are offered:

- Handcrafted Pottery and Ceramics
- Drawing and Painting
- Jewelry and Art Metal
- Weaving, Textiles and General Handcrafts
- Sculpture and Three-Dimensional Design
- Photography
- Woodwork and Repair

Table 7 - 2 DOD Space Authorization for Arts and Crafts Centers

Military Population <sup>1</sup>	Area (Gross SF)
1 - 100	----- <sup>2</sup>
101 - 250	2,000
501 - 1,000	4,000
1,001 - 3,000	6,000
3,001 - 5,000	7,500
5,001 - 7,000	10,000
7,001 - 10,000	14,000
10,001 - 15,000	20,000
15,001 - 20,000	25,000
20,001 - 25,000	30,000
25,001 - 30,000	35,000
30,001 - 40,000	40,000
40,001 - 50,000	45,000
60,001 - 70,000	55,000
80,001 - 90,000	65,000

<sup>1</sup>Military population consists of military strength plus 70% of the dependent population.

<sup>2</sup>Accommodate in other facilities.

Table 7 - 3 Recommended Space Allocation for Arts and Crafts Centers

Sub-Space	Size (Gross SF) based on Military Population 20,001 - 25,000
General Arts and Crafts	8,260
Handcrafted Pottery and Ceramics	1,600
Glassblowing	600
Drawing and Painting	1,760
Jewelry and Art Metal	1,200
Weaving, Textiles, and Handicrafts	1,700
Sculpture and Three-Dimensional Design	1,400
Other Spaces or Activities	12,390
Photography	2,065
Woodwork and Repair	7,225
Support Activities	3,100
Total Arts and Crafts Center	20,650

<sup>1</sup>The allocation of space for specific arts and crafts activities may be adjusted according to need as long as the total allocation does not exceed the authorized amount.

Arts and Crafts Centers generate a large amount of activity. The authorized minimum requirements for each installation is one multi-type center. However, the Arts and Crafts Center can be consolidated successfully with a larger Community Activity Center complex which offers a wide range of leisure activities. Libraries, theaters, recreation centers and snack bars can be mutually supportive with arts and crafts facilities and in attracting users. The consolidation of arts and crafts with shopping, recreation, and service activities, facilitates public transportation and access for service vehicles as well as users. Shared space potentials exist with theatre (stage workshop), library and recreation functions (meeting spaces), and materials supply and checkout for all CAC activities. If the arts and crafts user population is too large to be served by a single center, several small local centers may be appropriate.

Arts and Crafts Centers are typically divided into four basic functional areas, the woodworking shop, multi-purpose arts and crafts, photography studio, and utility/service areas. In addition, offices for the Arts and Crafts Program administration need to be provided.

The Arts and Crafts Center attracts a diversified cross section of the installation community with correspondingly diverse needs. For example, woodworking is popular among military and retired personnel, while photography attracts younger enlisted men. Transient personnel, unlike permanent post personnel, normally use the center sporadically for short term projects. The patterns of use may change with time. Programs and facilities must be adjustable to accommodate these varying and diverse user needs.

## a. General Arts and Crafts

### (1) Handcrafted Pottery and Ceramics

(a) *Description.* A comprehensive program includes clay preparation, forming techniques, decorating, firing procedures and glaze formulation. The process by which a novice is familiarized with the techniques includes demonstrations, lectures, graphic presentations and practice.

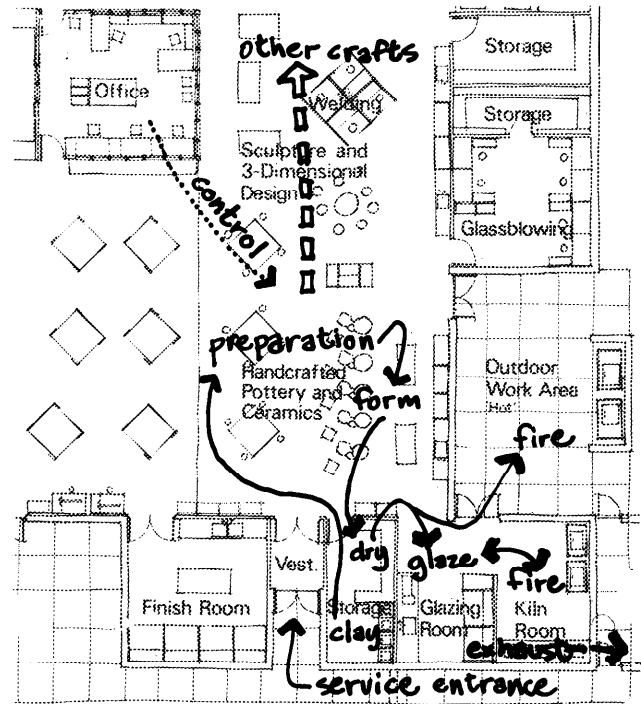
(b) *Space Allocation.* See Table 7 - 4.

(c) *Relationships.* The office and tool issue room should be near the general work area. Clay storage should be near a service entrance. Kilns and glassblowing furnaces are compatible and can be isolated together preferably on exterior walls or outdoors where climate permits.

Table 7 - 4 Space Allocation for Handcrafted Pottery and Ceramics

Sub-Space	Size (Gross SF) based on Military Population	
	20,001 - 25,000	
General Work Area	1,000	
Kiln Room	200	
Storage Area	200	
Exterior Work Area	200 <sup>1</sup>	
Total	1,600	

<sup>1</sup>Value is half the allocation for a similar interior space.



### (2) Glassblowing

(a) *Description.* The basic process starts with the production of molten glass within a refractory container in a furnace. Molten Glass can be made either by melting glass or by fusing together the raw materials that form glass. The molten glass is then gathered on the tip of a hollow-iron blow-pipe and is inflated, spun, tooled, sheared and manipulated to the desired shape. While it is worked the glass is kept molten by a small furnace called a "Glory Hole". The glass is finally tempered in an annealing oven.

(b) *Space Allocation.* See Table 7 - 5.

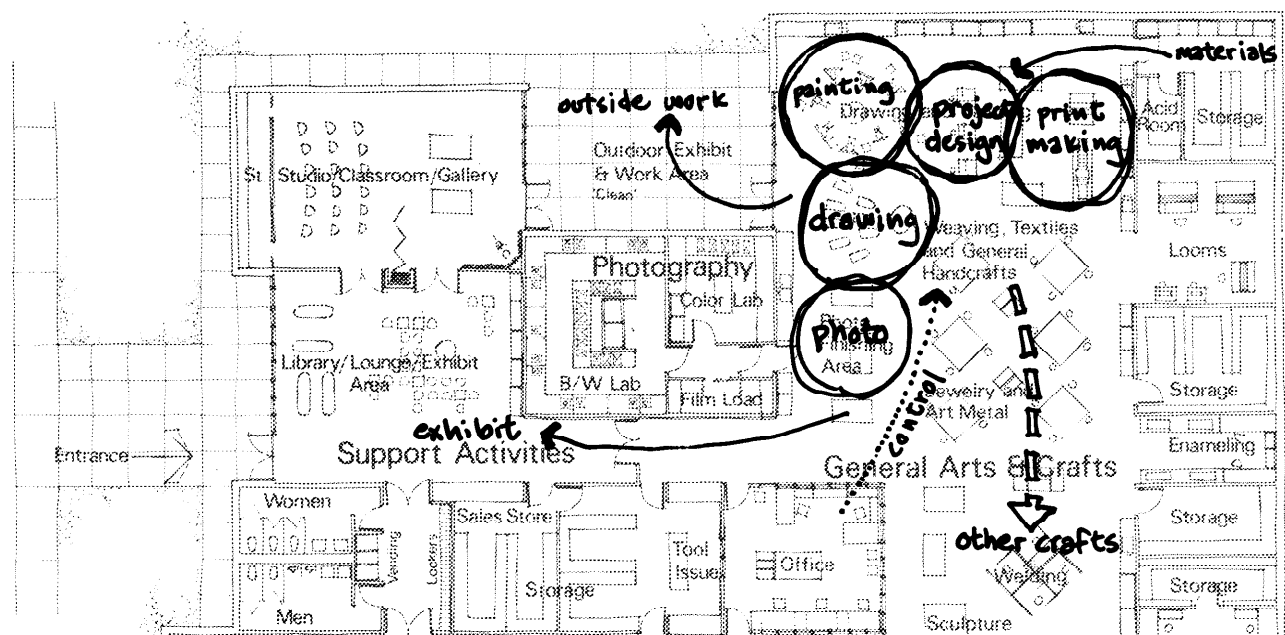
(c) *Relationships.* The glassblowing area should be near the outdoor work areas for gas kilns and storage areas. It requires a generous amount of space per participant and is incompatible to include in the general arts and crafts area of a combined facility.

Table 7 - 5 Space Allocation for Glassblowing

Sub-Space	Size (Gross SF) based on Military Population	
	20,001 - 25,000	
General Work Area	400	
Storage Area	100	
Exterior Work Area	100 <sup>1</sup>	
Total	600 <sup>2</sup>	

<sup>1</sup>Value is half the allocation for a similar interior space.

<sup>2</sup>Not recommended for interior space with reduced square footage, especially in a CAC facility.



**(3) Drawing and Painting**

- (a) *Description.* In addition to painting and drawing in a variety of media, the graphic arts program includes design projects, drafting, wood and linoleum block printing, etching, lithography and silkscreen painting.
- (b) *Space Allocation.* See Table 7 - 6.
- (c) *Relationships.* Drawing and painting should be near the office, photography studio, exterior work areas, and studio classroom gallery area.

Sub-Space	Size (Gross SF) based on Military Population
	20,001 - 25,000
General Work Area	1,200
Acid Room	60
Storage Area	300
Exterior Work Area	200 <sup>1</sup>
Total	1,760

**(4) Jewelry and Art Metal**

- (a) *Description.* Processes include designing and construction with sheets, wires, tubes, and soldering, welding and casting. Additional activities in this category include procedures for lapidary (cutting or polishing stones) and metal enameling (fusing colored glass to metal in a kiln).
- (b) *Space Allocation.* See Table 7 - 7.
- (c) *Relationships.* Jewelry and Art Metal studio should be near the office and other general arts and crafts areas.

Sub-Space	Size (Gross SF) based on Military Population
	20,001 - 25,000
General Work Area	800
Enameling Room	200
Storage Area	200
Total	1,200

### (5) Weaving, Textiles and General Handcrafts

(a) *Description.* This category includes loom weaving, tapestry work, batik, tie-dye, macrame, soft sculpture, banners, fabric collages, needlepoint, stitchery, and sewing. General handcrafts include leather craft (braiding, sewing, tooling etc.), bookbinding, basketry, candle making and puppetry.

(b) *Space Allocation.* See Table 7 - 8.

(c) *Relationships.* The office, library, lounge, exhibit area, studio and classrooms should be easily accessible from the textile and general handcrafts area.

Table 7 - 8 Space Allocation for Weaving, Textiles and General Handcrafts

Sub-Space	Size (Gross SF) based on Military Population
	20,001 - 25,000
General Work Area	1,000
Weaving Area	400
Storage Area	300
Total	1,700

### (6) Sculpture and Three-Dimensional Design

(a) *Description.* This program requires space for clay modeling, wood carving, stone cutting, plastic work, metal casting and welding. The area is also the center for model building, papier mache work, display and exhibition properties, and interior decoration.

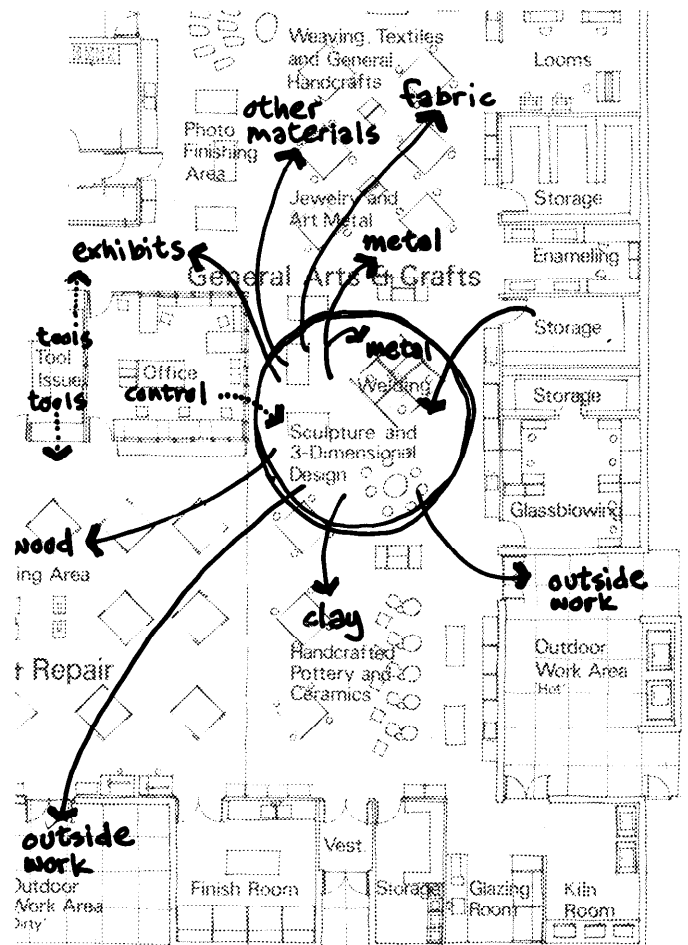
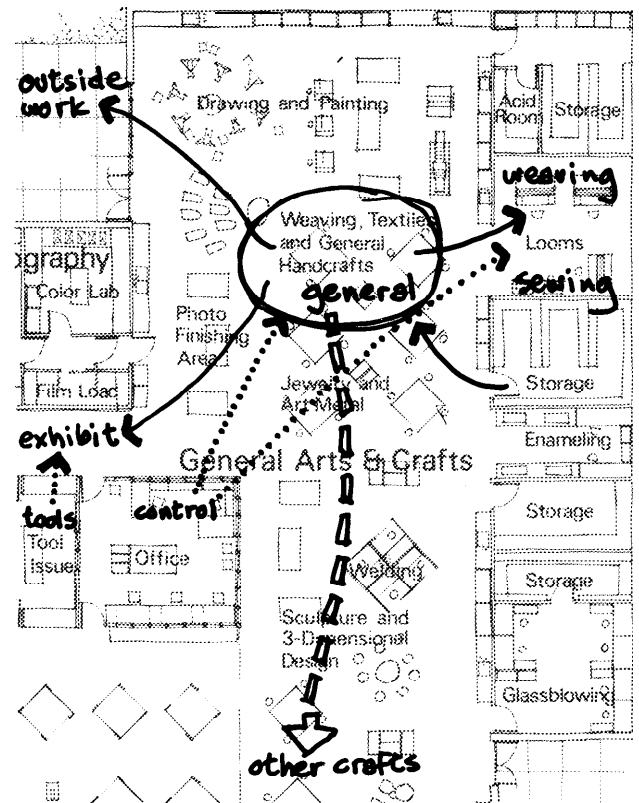
(b) *Space Allocation.* See Table 7 - 9.

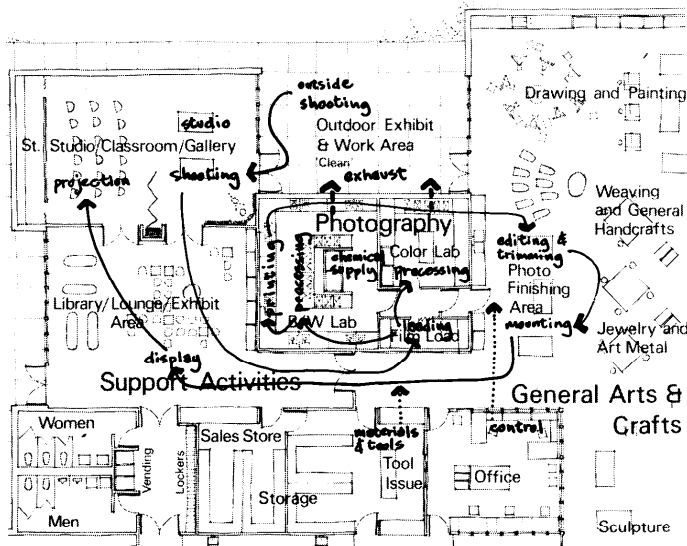
(c) *Relationships.* Sculpture and three-dimensional design should be near the office, studio/classroom/gallery, handcrafted pottery and ceramics, jewelry and art metal, woodwork and repair, drawing and painting and exterior work areas. Good outdoor access is important for large projects and materials movement.

Table 7 - 9 Space Allocation for Sculpture and Three-Dimensional Design

Sub-Space	Size (Gross SF) based on Military Population
	20,001 - 25,000
General Work Area	1,000
Storage Area	200
Exterior Work Area	200 <sup>1</sup>
Total	1,400

<sup>1</sup>Value is half the Allocation for a similar interior space.





## b. Other Spaces or Activities

### (1) Photography

(a) *Description.* Processing consists of loading, developing, enlarging, print washing, drying, trimming and mounting.

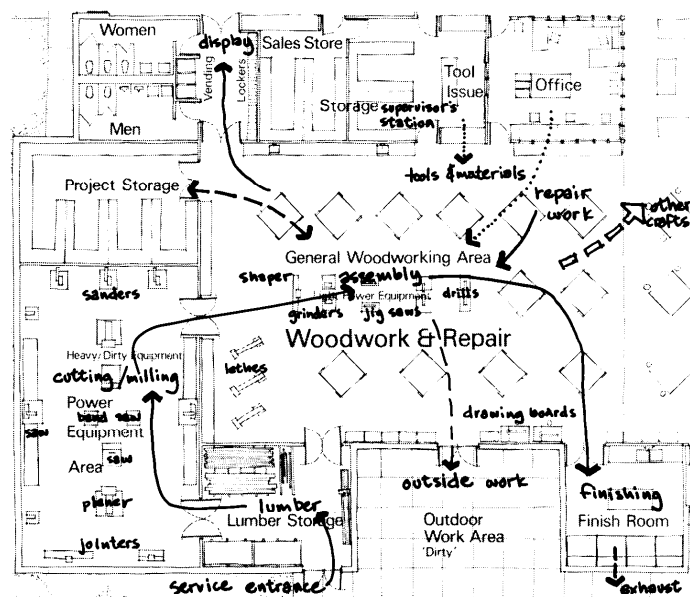
(b) *Space Allocation.* See Table 7 - 10.

(c) *Relationships.* The studio/classroom/gallery should be near the main entrance, library/lounge/exhibit area and office. Finishing is closely related to graphic arts and may share the same area.

Table 7 - 10 Space Allocation for Photography

Sub-Space	Size (Gross SF) based on Military Population	
	20,001 - 25,000	
Monochromatic Processing Lab	600	
Color Processing Lab	200	
Film Loading Room	65	
Finished Area	400	
Storage Area	100	
Studio/Classroom/Gallery	500	
Exterior Work Area	200 <sup>1</sup>	
Total	2,065	

<sup>1</sup>Value is half the allocation for a similar interior space.



### (2) Woodwork and Repair

(a) *Description.* The woodworking program requires space and equipment for a variety of general carpentry and cabinetry activities. These include furniture design, construction, repair and refinishing, upholstery, turning pattern work, picture framing and rough carpentry projects. The repair of small appliances and other electronic equipment is part of the woodworking program, but should be isolated in a more dust-free area such as the general arts and crafts area.



(b) *Space Allocation.* See Table 7 - 11.

(c) *Relationships.* The woodworking shop should be located in an area of the building which isolates noise. The supervisor's station should be near or part of the office and tool issue room. The service and material receiving entrance should be under staff supervision. Provide convenient access to the technical reference library. Wash-up areas and lockers for work clothes should be located near the shop entrance. Good exterior access is required for large scale materials delivery and projects. Adjacency to the theatre stage will permit shared use for scenery and props workshop.

Table 7 - 11 Space Allocation for Woodwork and Repair

Sub-Space	Size (Gross SF) based on Military Population
	20,001 - 25,000
General Work Area	3,025
Power Equipment Area	2,000
Lumber Storage Area	500
Finish Room	400
Project Storage	600
Tool Issue Room and Supervisor's Station	300
Exterior Work Area	400 <sup>1</sup>
Total	7,225

<sup>1</sup>Value is half the allocation for a similar interior space.

## c. Arts and Crafts Support

### (1) Arts and Crafts Support Areas

(a) *Description.* These spaces include the office, sales store, tool issue and storage, library/lounge/exhibit areas, studio/classroom/gallery, circulation, lobby, lockers, utility, and service areas.

(b) *Space Allocation.* See Table 7 - 12.

(c) *Relationships.* The support areas should be convenient to all major areas of the arts and crafts center. Major potential for shared space with other parts of the Community Activity Center exist: in a joint sales store and equipment issue area with other programs; in inclusion of arts and crafts publications in the general-use library; in shared use of classroom/meeting space, vending area, lounge, lockers, restrooms and circulation. The arts and crafts exhibit space should have good visibility and accessibility from the central circulation of the CAC.

Table 7 - 12 Space Allocation for Support Activities

Sub-Space	Size (Gross SF) based on Military Population
	20,001 - 25,000
Office	300
Sales Store	200
Tool Issue and Storage Area	300
Library/Lounge/Exhibit	600
Studio/Classroom/Gallery	500
Restrooms	300
Lockers and Vending Area	100
Circulation	800
Total	3,100



## 7 - 4

# Automotive Centers

DG 1110-3-126

Auto Crafts is one of the most widely used facilities in the Morale Support Activities Program. The primary users are assigned military personnel, both officers and enlisted men. Military retirees and dependants of assigned personnel, whose vehicles are registered with installation authorities, are eligible users on a space available basis. Army Continuing Education System (ACES) classes, in auto mechanics, anti-pollution control, upholstery, air conditioning, welding and body work, may also utilize the auto repair facilities for practical laboratory experience.

Other activities include the constructive repair and maintenance of personal vehicles such as cars, trucks, trailers, motorcycles and bicycles. Highly specialized operations are not generally performed and long term repairs are authorized only when space is available. Some storage space must be provided for inoperative vehicles.

Due to the nature of auto crafts, a separate specialized facility is authorized for each installation. Unlike Morale Support Activities, Automotive Centers' are not necessarily located close to other social/recreational facilities. Location in a multi-building CAC complex should not be considered. The Automotive Center must be sited to avoid any unfavorable impact, such as noise or visual blight of exposed vehicle storage, on community activities or nearby residential or operations areas. Good vehicular access is essential, and convenient relationship to gasoline/service stations desirable.

Table 7 - 13 DOD Space Authorization for Automotive Centers

Military Population <sup>1</sup>	Area (Gross SF) <sup>2</sup>
0 - 25	None
25 - 50	1,000
50 - 100	1,500
101 - 250	2,250
251 - 500	3,000
501 - 1,000	4,200
1,001 - 3,000	6,000
3,001 - 5,000	9,000
5,001 - 7,000	12,000
7,001 - 10,000	15,000
10,001 - 15,000	18,000
15,001 - 20,000	21,000
20,001 - 30,000	24,000
30,001 - 40,000	30,000
40,001 - 50,000	36,000
50,001 - 60,000	42,000

<sup>1</sup>Military population is defined as military strength plus 10% of dependent population.

<sup>2</sup>Size - based on 500 square feet per auto.

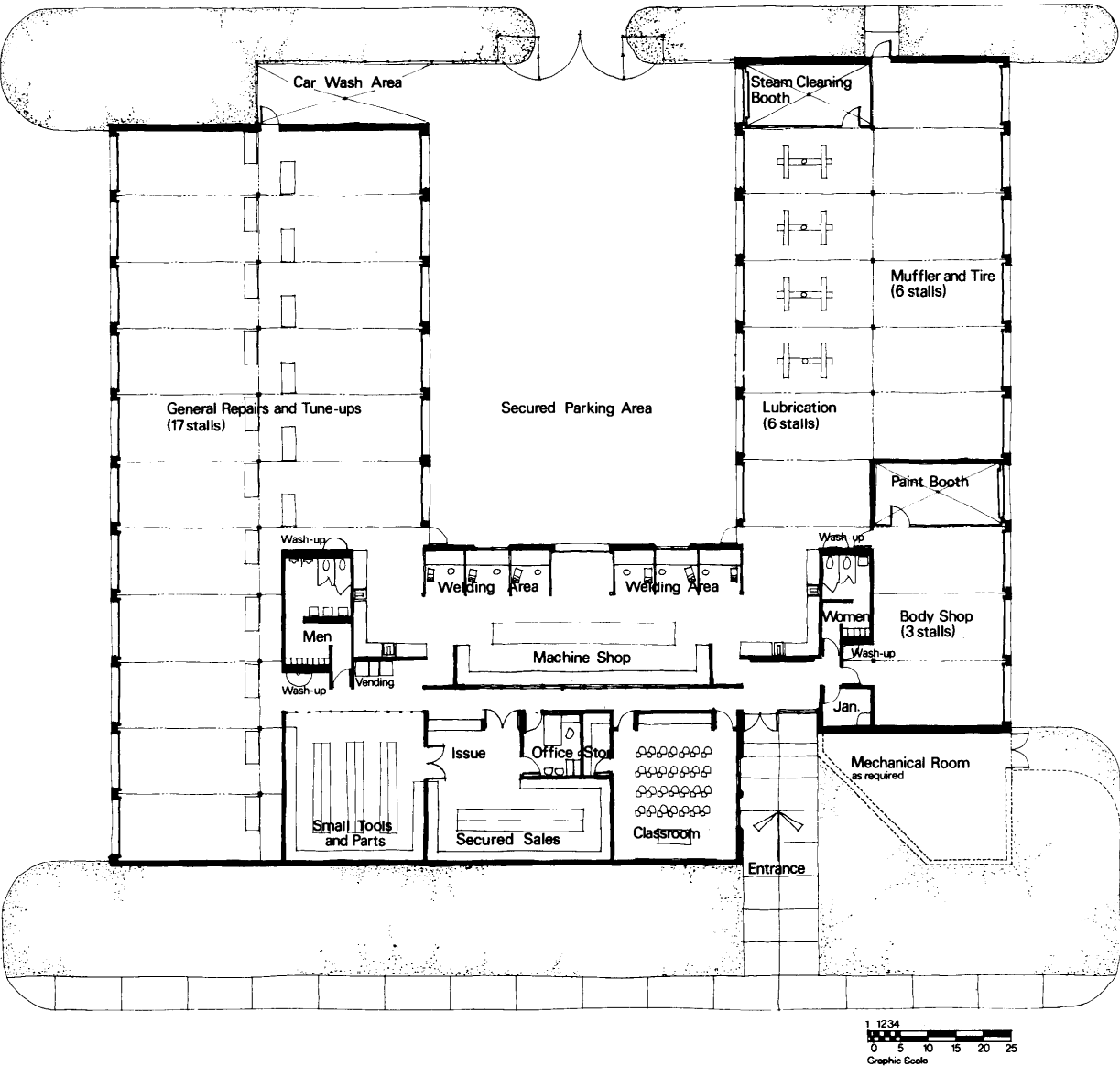
Table 7 - 14 Recommended Space Allocation for Automotive Centers

Sub-Space	Size (Gross SF) based on Military Population	
	External Vehicular Circ. <sup>1</sup> 15,000 - 20,000	Internal Vehicular Circ. <sup>2</sup> 15,000 - 20,000
Automotive Areas	11,660	10,140
Welding and Machine Shop	2,200	2,820
Office and Storage	1,650	2,120
Classroom	710	920
Service Areas	780	1,000
Total Automotive Center	17,000	17,000

<sup>1</sup>Total number of auto stalls - 34.

<sup>2</sup>Total number of auto stalls - 25.

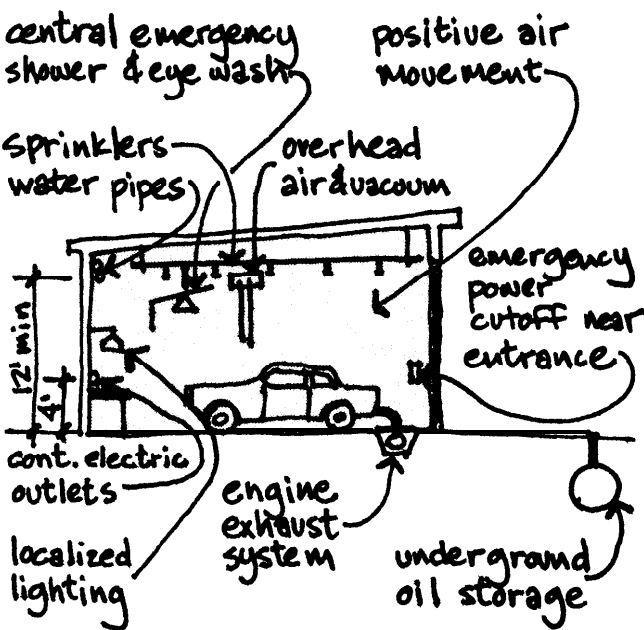
<sup>1</sup>Automotive Centers are referred to as Auto Crafts Centers in the related design guide, DG 1110-3-126.



a. Automotive Areas

- (1) *Description.* Most normal automotive service operations take place in this area. These spaces should be designed to facilitate the frequent movement of vehicles.
- (2) *Space Allocation.* See Table 7 - 15.
- (3) *Relationships.* Auto bodywork stalls should be separate from other work areas because of the dust and noise produced. Paint spray booths also require physical separation and independent exhaust systems. Steam cleaning stalls should be separated from dry activity areas. Steam cleaning can also be done outdoors, and ideally the equipment should be located for both indoor and outdoor use. Concrete pads should be provided to eliminate deterioration of asphalt paving.

Sub-Space	Size (Gross SF) based on Military Population	
	External Vehicular Circ. 15,000 - 20,000	Internal Vehicular Circ. 15,000 - 20,000
General Repairs and Tune-Ups	6,280	4,650
Muffler and Tire Shop	1,900	1,965
Lubrication Stalls	1,900	1,550
Body Shop	950	1,185
Paint Booth	315	395
Steam Cleaning	315	395
Total	11,660	10,140



b. Service and Support Areas

(1) Welding and Machine Shop

- (a) *Description.* This program of activities includes cutting, grinding and machining of parts as well as welding.
- (b) *Space Allocation.* See Table 7 - 16.
- (c) *Relationships.* The machine and welding shop should be convenient to the repair areas and storage areas. A separate ventilation system is required for welding booths.

Table 7 - 16 Space Allocation for Welding and Machine Shop

Sub-Space	Single (Gross SF) based on Military Population	
	External Vehicular Circ. 15,000 - 20,000	Internal Vehicular Circ. 15,000 - 20,000
Shop Area	1,760	2,080
Weiding Area	440	520
Total	2,200	2,600

**(2) Office and Storage Areas**

(a) *Description.* These areas house an office, sales, tools issue, and storage space. In addition to storage requirements for tools, storage of flammable materials such as paint and welding tanks must be provided in enclosures away from the building and from vehicles. Storage lockers for patrons' work clothes, tools and small parts are desirable.

(b) *Space Allocation.* See Table 7 - 17.

(c) *Relationships.* The office, sales, tool issue and storage areas are designed as a unit so they may be controlled, from a centrally located supervisor's station.

Table 7 - 17 Space Allocation for Office and Storage

Sub-Space	Size (Gross SF) based on Military Population	
	External	Internal
	Vehicular Circ. 15,000 - 20,000	Vehicular Circ. 15,000 - 20,000
Office Space	110	140
Small Tools and Parts	770	980
Issue Area	110	140
Secured Sales	660	840
Totals	1,650	2,100

**(3) Classroom**

(a) *Description.* The classroom is used for formal instruction and club meetings. A small library may be included. Provisions should be made for the use and storage of visual aids, models and other training materials.

(b) *Space Allocation.* See Table 7 - 18.

(c) *Relationships.* The classroom should be located near the main entrance, with direct access to storage.

Table 7 - 18 Space Allocation for Classroom

Sub-Space	Size (Gross SF) based on Military Population	
	External	Internal
	Vehicular Circ. 15,000 - 20,000	Vehicular Circ. 15,000 - 20,000
Classroom	660	840
Storage Room	50	70
Total	710	910

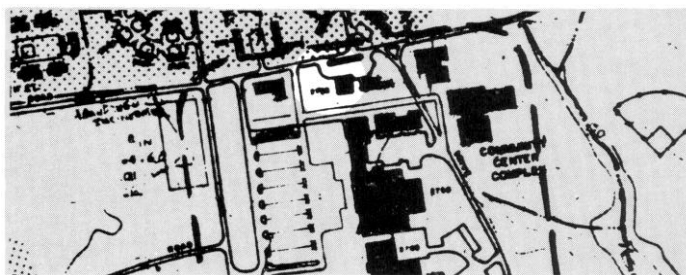
**(4) Service Areas**

(a) *Description.* These areas serve as support to the Auto Crafts Center and include toilets, wash areas, vending areas and a janitor's closet.

(b) *Space Allocation.* See Table 7 - 19.

Table 7 - 19 Space Allocation for Service Areas

Sub-Space	Size (Gross SF) based on Military Population	
	External	Internal
	Vehicular Circ. 15,000 - 20,000	Vehicular Circ. 15,000 - 20,000
Men's Toilet and Locker	265	310
Women's Toilet and Locker	165	195
Wash Areas	220	260
Vending Areas	50	65
Custodial	80	90
Total	780	920



## 7 - 5

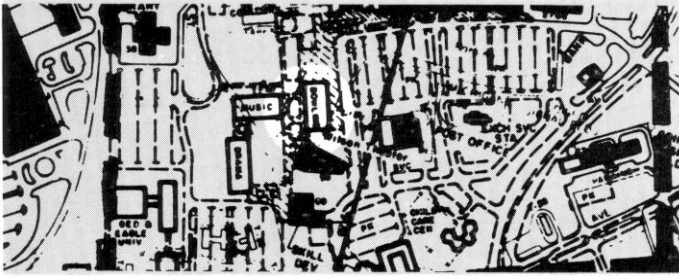
# Banking Facilities

Banking facilities may be established only when they are authorized by the U.S. Treasury Department. Normally, only one banking facility is authorized for each installation. Branch banks, providing complete banking services, shall not be established without the prior approval of the appropriate Military Department. Space allowances for banking facilities are shown in Table 7 - 20. Banking facilities are appropriately located in the Main Post Center for convenient post-wide use and accessible relationship to all other community functions.

Table 7 - 20 DOD Space Authorization for Banking Facilities

Personnel Population <sup>1</sup>	Area (Gross SF)
1 - 1,000	1,500
1,001 - 2,000	2,375
2,001 - 3,000	3,250
3,001 - 4,000	3,625
4,001 - 5,000	4,000
5,001 - 6,000	4,375
6,001 - 7,000	4,750
7,001 - 9,000	5,560
9,001 - 11,000	6,375
11,001 - 13,000	7,190
13,001 - 15,000	8,000
15,001 - 17,000	10,000
17,001 - 20,000	13,000
Over 20,000	Determined by Engineering Study

<sup>1</sup>Active duty military personnel assigned to an installation and stationed within a commuting area not served by another military banking office plus civilian employees of the installation.



## 7 - 6

# Bowling Facilities

Table 7 - 21 DOD Spaces Authorization for Bowling Facilities

Military Population <sup>1</sup>	No. Lanes	Area (Gross SF) <sup>4</sup>
1- 250	2	2,700
251- 1,000	4	4,500
1,001- 1,800	6	6,600
1,801- 2,500	8	8,500
2,501- 3,200	10	10,750
3,201- 3,800	12	12,800
3,801- 4,900 <sup>2</sup>	12	12,800
4,901- 6,300	16	16,500
6,301- 7,700	18	18,400
7,701- 9,800	24	24,700
9,801- 12,600 <sup>3</sup>	30	31,000

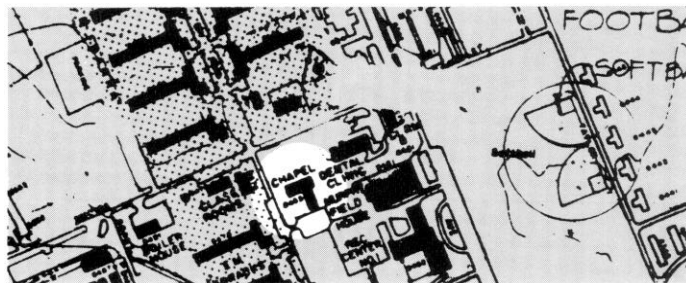
<sup>1</sup>Military population is military strength plus 40% of the dependents.

<sup>2</sup>The figures given for military populations over 3,800 apply only to the 48 contiguous states. See DOD 4270.1-M for figures which apply overseas.

<sup>3</sup>For each full increment of 700 military population above 12,500, two additional lanes, totaling 1,900 square feet, may be provided.

<sup>4</sup>For each increment of 16 lanes, an additional 900 square feet may be added for a game room for billiards, pool, amusement games, etc.

Bowling facilities are among the most actively used of Morale Support Activities functions. Authorized lanes and space are indicated in Table 7 - 21. Bowling facilities should, where possible, be consolidated with other recreational and active sports in Community Activity Centers. For large bowling facilities, this may best be done by co-location of a separate structure. However, small numbers of lanes can be integrated in the Main Post and Local CAC's with benefits of shared snack bars, electronic and other games areas, and other support spaces. Adequate parking for bowling must be conveniently located, but time-of-day use patterns may permit effective sharing with other functions. Acoustic isolation of the bowling center from other spaces is essential, but good visibility between bowling and the recreation functions is desirable.



## 7 - 7

# Chapels and Religious Education Facilities

DG 1110-3-116

The Army Chaplain at the installation level has the responsibility to provide religious services for the military community. In keeping with contemporary needs, facilities should accommodate a variety of activities and religious expression. In addition to services, chaplains normally conduct bible classes, religious fellowship activities (to include preparation and serving of meals), film festivals, liturgical drama, choir practice, music lessons for choir leaders, organists and pianists, family seminars, individual and group counseling, and various committee meetings. These activities may involve special equipment such as extra microphones, rheostat lighting, stereo systems, and audio visual setups.

The Religious Education Facility (REF) is utilized seven days a week, for the religious education and training of single soldiers, married soldiers, and dependents. In addition, spiritual group activities are conducted to include ecumenical programs.

The design guide outlines these major functional areas:

- The Chapel
- Chapel Support Areas
- Learning Areas
- REF Support Areas

The chapel site should be convenient to family housing, troop billeting areas, and other community quality of life support facilities. The site should enrich the visual symbolism of the Chapel center and relate to existing or proposed REF. Chapel and Religious Education Facilities are not necessarily consolidated with MSA Community Activity Centers. However, on very small posts, sharing of community facilities may be an option until dedicated facilities are provided.

Table 7 - 22 DOD Space Authorization for Religious Facilities<sup>1</sup>

Installation <sup>3</sup> Population	Number of Chapel Seats Authorized	Area (Gross SF) of Religious Educational Facilities Authorized
	Provided in Multiple-purpose facility <sup>2</sup>	
1 - 500		
501 - 1,000	200	3,855
2,001 - 3,000	500	5,535
5,001 - 6,000	900	8,055
10,001 - 11,000	1,500	12,255
15,001 - 16,000	2,100	16,455
20,001 - 21,000	2,400	20,655
25,001 - 26,000	2,700	24,855
29,001 - 30,000	3,000	28,215
Over 30,000	60 seats per 1,000 persons over 30,000	840 square feet per 1,000 persons over 30,000

<sup>1</sup>Chapels, exclusive of religious education facilities, will ordinarily be built in one of the listed sizes indicated below for which the unit space criteria listed will be utilized. Mechanical space is not included in the space criteria and tabulation but shall be provided as required.

Number of Seats	Authorized Sq. Ft. Per Seat
200	32.5
300	28.5
400	25.5
500	23.0
600	22.2

<sup>2</sup>Provide 850 square feet of space for chaplain, chaplain services specialist, storage space for ecclesiastical material and small meditation chapel room approximately 30 - 35 seats.

<sup>3</sup>Installation population is defined as military strength and their dependents. Only those dependents 6 years old and older should be included when determining the number of chapel seats authorized. Minor dependents (under 6 years old) may be included for the purpose of determining authorized space for religious educational facilities. Civilian personnel may be included when they are dependent on the installation for religious support.



## a. The Chapel

### (1) Narthex

(a) *Description.* The narthex is the major entry point and should maximize the opportunity for meeting and informal conversation. The narthex is a key interior space for circulation, fellowship, and information.

(b) *Space Allocation.* See Table 7 - 23.

(c) *Relationships.* The narthex forms a transition between the exterior plaza and the chapel nave. Ideally, all major entrances into the nave, the administrative areas and REF, should occur through the narthex. Coat closets, public rest rooms and the bride's room should be adjacent to this area. The sacristy, if possible, should also be adjacent so that the minister can readily change his vestments and great worshippers.

### (2) Nave

(a) *Description.* The nave is the central worship area in the chapel. Seating in the nave must be positioned to allow access from aisles and sight lines to the chancel and pulpit areas. The community of worshippers should seem as continuous as possible, without end panel divisions.

(b) *Space Allocation.* See Table 7 - 23.

(c) *Relationships.* The nave must be immediately adjacent to the narthex and adjacent to the chancel (the center of worship). The chancel in all cases is part of the same volume as the nave.

### (3) Chancel

(a) *Description.* The chancel area is a place for ceremony from which the Priest, Minister, or Rabbi leads the congregation in worship. A minimum chancel of 20' x 20' is acceptable for all chapel size variations. However this dimension may be increased when the choir is on the same raised platform with the chancel, thus becoming an integral part of the chancel area.

(b) *Space Allocation.* See Table 7 - 23.

(c) *Relationships.* The chancel must be an integral part of the nave with only a small change in level as a separation. The choir must be immediately adjacent as well. The activity room may open directly into the chancel or into the nave. Storage must be provided within 50 feet from the chancel.

### (4) Activity Room

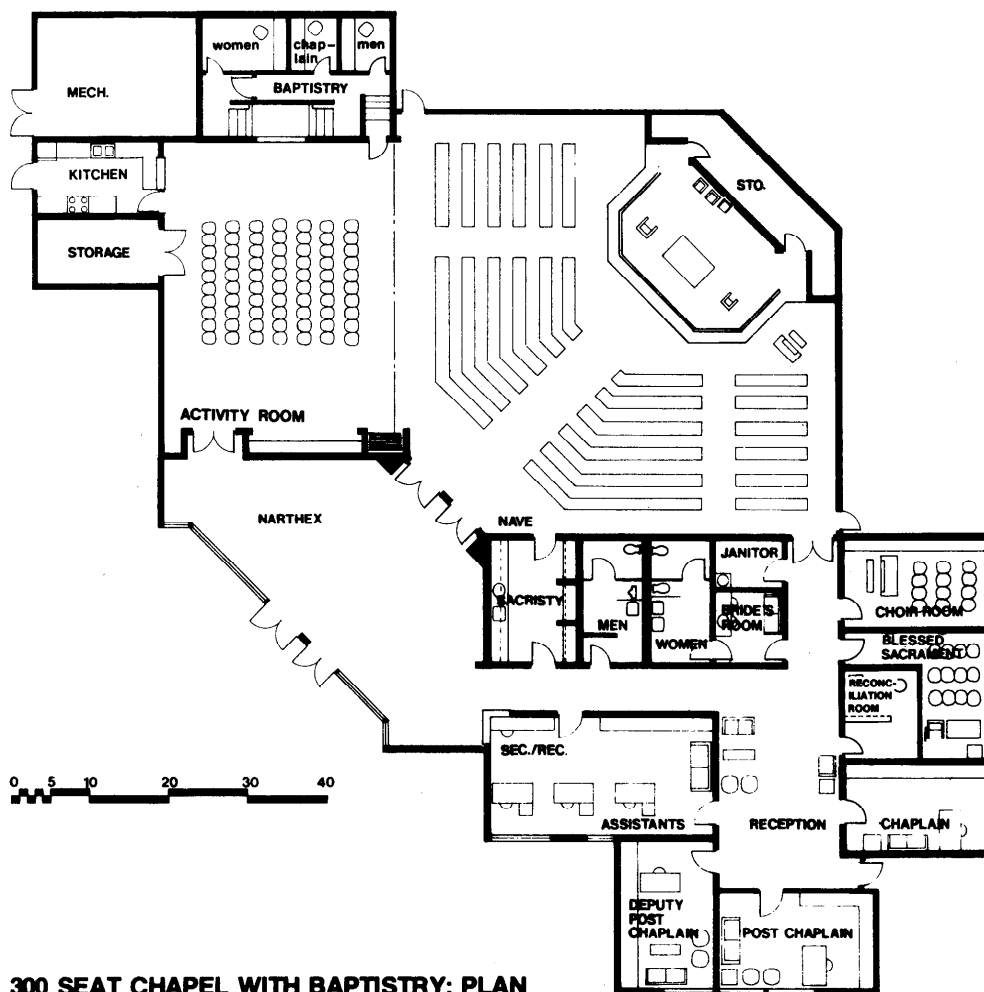
(a) *Description.* The activity room provides space for Sunday School classrooms (open for large classes or subdivided for smaller class instruction), family dinners, receptions, group parties and occasionally for baptismal services. With a moveable partition, the activity room can provide additional seating for services.

(b) *Space Allocation.* See Table 7 - 23.

(c) *Relationships.* The activity room is immediately adjacent to the Nave/Chancel area in order to provide

Table 7 - 23 Recommended Space Allocation for Chapels

Sub-Space	Size (Gross SF) based on Installation Population			
	501-1,000	1,001-1,500	1,501-2,000	2,001-3,000
The Chapel	4,625	6,750	8,250	9,765
Nave	1,735	2,600	3,345	4,210
Narthex	920	1,210	1,445	1,630
Activity Room	765	765	885	945
Chancel	865	1,365	1,735	2,105
Baptistry	-	410	410	415
Blessed Sacrament Room	175	235	265	295
Reconciliation Room	165	165	165	165
Support Areas	2,330	3,005	3,680	3,845
Worship Support Areas	695	725	825	855
Counseling and Administrative Areas	1,135	1,655	2,045	2,090
General Support Areas	160	175	230	240
Restrooms	265	330	425	470
Kitchen	75	120	155	190
Total Chapel Center	6,955	9,755	11,930	13,610



**300 SEAT CHAPEL WITH BAPTISTRY: PLAN**

additional seating for overflow worship. It is also immediately adjacent to the kitchen and the baptismal pool. Direct access is desirable to the exterior and to outdoor activity areas. It is essential to the narthex, to permit simultaneous activities in the nave and activity room.

#### **(5) Baptistry**

(a) *Description.* Most Christian sects practice some form of baptism involving a baptismal font or immersion pool. The baptismal service usually involves a small number of people and occurs at times other than the regular worship service. Therefore, the baptistry is best located adjacent to the activity room, rather than the nave.

(b) *Space Allocation.* See Table 7 - 23.

(c) *Relationships.* Dressing rooms for participants (male and female), and the chaplain, should be immediately adjacent to the immersion pool and separate from general public circulation. When not in use, the immersion pool should be masked from view. Restroom facilities should also be nearby.

#### **(6) Blessed Sacrament Room**

(a) *Description.* The Blessed Sacrament Room is used during Roman Catholic services and for private prayer and devotion.

(b) *Space Allocation.* See Table 7 - 23.

(c) *Relationships.* The Blessed Sacrament Room should be directly accessible from public circulation and adjacent to the reconciliation room. The room should be convenient to the chaplain's office, sacristy and narthex.

#### **(7) Reconciliation Room**

(a) *Description.* The reconciliation room is an alternative to the traditional confessional booth for Roman Catholics. It provides the option of confession with or without face-to-face contact. The size of the reconciliation room ranges from 120 to 140 square feet.

(b) *Space Allocation.* See Table 7 - 23.

(c) *Relationships.* The reconciliation room should be directly accessible from public circulation and adjacent to the blessed sacrament room. The room should be convenient to the chaplain's office, sacristy and narthex.

## b. Support Areas

### (1) Worship Support Areas

(a) *Description.* These areas are directly related to activities which take place in the chapel and worship areas. They include a bride's room, a choir room for choir practice, robing and storage of robes, and a sacristy for chancel supplies and vesting.

(b) *Space Allocation.* See Table 7 - 23.

(c) *Relationships.* The bride's room should be adjacent to the ladies' restroom and should have easy access to the narthex. The choir room should have direct access to the narthex but be acoustically separate. The sacristy should have easy access to restroom facilities, chancel and chaplain's offices.

### (2) Counseling and Administrative Areas

(a) *Description.* The chaplain's Office must be both an efficient place to work and a pleasant environment for counseling. A work area is also provided for several assistants who need space for bookkeeping, secretarial work, filing, reception, reproduction and storage.

(b) *Space Allocation.* See Table 7 - 25.

(c) *Relationships.* These areas should be directly adjacent to the narthex. Visual control of the narthex and entry is desirable.

Table 7 - 24 Recommended Space Allocation for Religious Education Facilities

Sub-Space	Size (Gross SF) based on Installation Population				
	501-1,000	5,001-6,000	10,001-11,000	15,001-16,000	20,001-21,000
Learning Areas	3,745	7,375	10,560	15,860	20,435
Assembly/Classroom	1,225	2,355	3,490	4,520	6,085
Nursery	355	535	800	1,420	1,780
Preschool Area	140	890	1,335	1,680	2,666
Elementary Area	570	475	1,525	1,590	3,810
Junior High/High School Area	1,145	2,475	2,430	5,335	4,445
Resource Center	310	645	980	1,315	1,650
Support Areas	810	1,565	2,085	2,825	3,460
General Support Areas	170	285	290	525	655
Administration	180	305	305	305	305
Restrooms	330	710	1,090	1,460	1,835
Kitchen	130	265	400	535	665
Total REF <sup>1</sup>	4,555	8,940	12,645	18,685	23,895

<sup>1</sup>These totals are based on gross square foot equivalents for each space and sometimes exceed the totals presented in the design guide.

Table 7 - 25 Space Allocation for the Chapel: Counseling and Administrative Areas

Sub-Space	Size (Gross SF) based on Military Population			
	501-1,000	Over 1,000	Under 2,000	2,00-3,00
Post Chaplain	285	305	305	305
Post Deputy Chaplain	-	285	285	285
Assistant Post Chaplain	-	-	235	235
Chaplain	235	235	235	235
Assistant Area	425	425	520	520
Secretary/Receptionist	-	170	170	170
Reception Area	190	235	295	340
Total	1,135	1,655	2,045	2,090

**(3) Chapel and REF Support Areas**

(a) *Description.* Storage rooms should be provided in the Chapel and REF for equipment, furnishings and supplies. A janitor's room will also be needed.

(b) *Space Allocation.* See Tables 7 - 23 and 7 - 24.

(c) *Relationships.* Storage is particularly useful near the narthex (for coats), activity rooms, worship support areas, administrative and learning areas.

**(4) Restrooms**

(a) *Description.* Adequate restrooms should be provided for staff members, congregation, students and teachers. In larger REF's children's restrooms are also required in preschool and elementary areas.

(b) *Space Allocation.* See Tables 7 - 23 and 7 - 24.

(c) *Relationships.* Restrooms should be convenient to all spaces in the chapel, particularly those spaces with a high number of occupants. Restrooms must be adjacent to the nursery, sacristy, and choir room, and convenient to the activity room and assembly/classroom area. The women's restroom in the chapel should be directly accessible from the bride's room.

**(5) Kitchen**

(a) *Description.* The kitchen is used for the preparation of snacks and light meals served in the activity room, classroom areas, preschool area, nursery, and administrative areas. In addition it may be used for the preparation of meals for dinners and banquets served in either the assembly/classroom area or activity room. The kitchen should accommodate four persons working simultaneously. When the chapel and REF are contiguous, the kitchen is normally located in the REF portion of the Chapel Center.

(b) *Space Allocation.* See Tables 7 - 23 and 7 - 24.

(c) *Relationships.* Kitchens must be adjacent to the assembly/classroom area or the activity room and to an exterior service for trash disposal. They should also be convenient to the outdoor activity areas. Kitchen areas must be easily accessible from nursery, high school/junior high school areas, and administrative areas.

**(6) REF Administration**

(a) *Description.* The Director of Religious Education's (DRE) office should provide space for off ice work, general study, and informal planning sessions with volunteer teachers. The conference room should seat 15 - 20 people for conferences, meetings, and training sessions, with provisions for audio-visual presentations. One or two offices should be provided for administrative staff or assistants to the DRE.

(b) *Space Allocation.* See Table 7 - 26.

(c) *Relationships.* This area should be adjacent to the narthex in a combined chapel and REF.

**c. Learning Areas****(1) Assembly/Classroom**

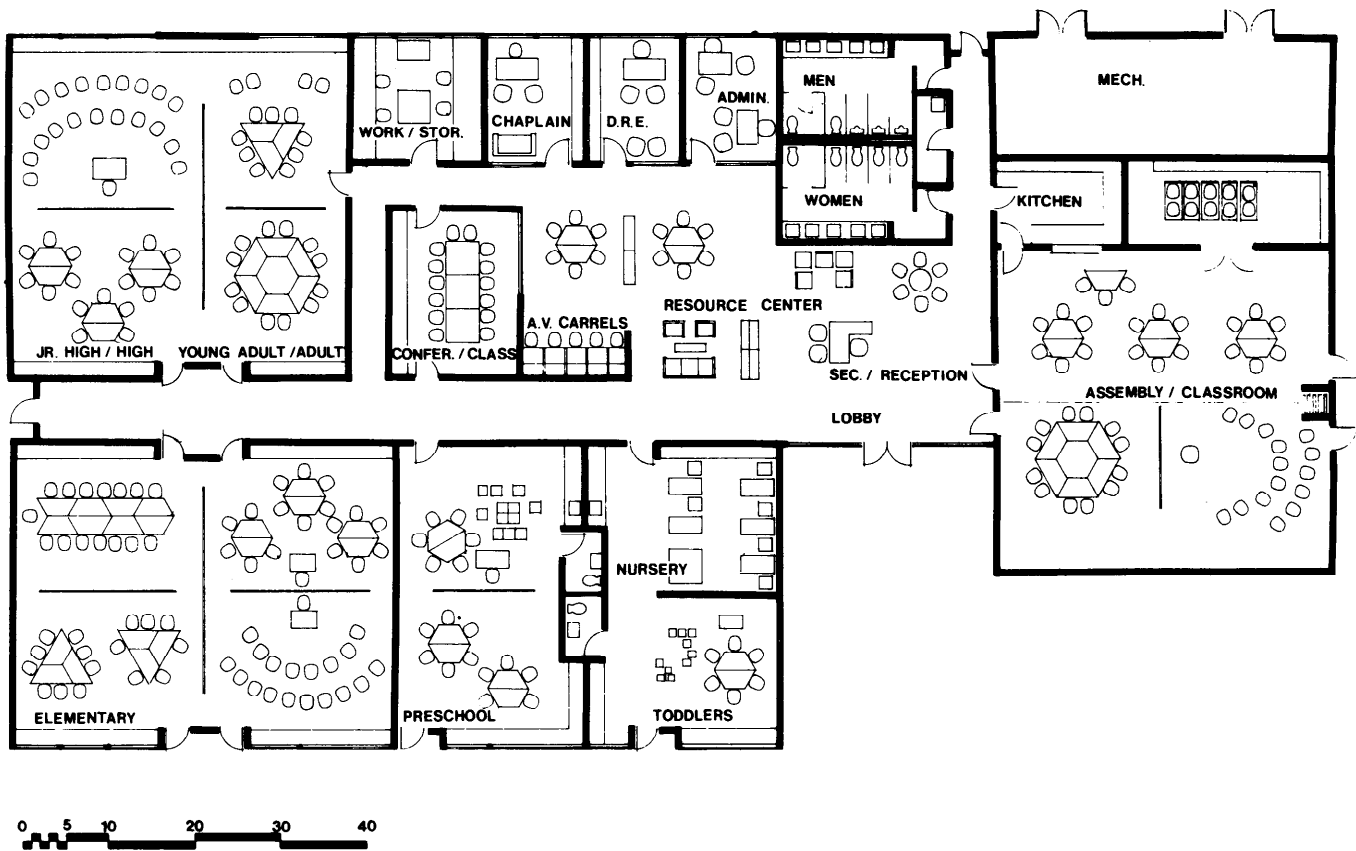
(a) *Description.* The assembly/classroom area should be a highly flexible space capable of accommodating groups of 30 or more people gathered for meetings, lectures, slides, movies, large classes, parties and theatrical performances. Movable partitions should be provided to subdivide the assembly area into two or more efficiently organized sub-areas.

(b) *Space Allocation.* See Table 7 - 24.

(c) *Relationship.* The assembly/classroom should be adjacent to kitchen facilities and the outdoor activity area. The room must have direct access to circulation, storage, entry, and restroom areas. In the small Chapel Centers the assembly/classroom may be adjacent to the nave.

Table 7 - 26 Space Allocation for REF Administration

Sub-Space	Size (Gross SF) based on Military Population				
	501-1,000	5,001-6,000	10,001-11,000	15,001-16,000	20,001-21,000
Director's Off ice	-	-	254	445	510
Conference Room	-	-	510	510	510
Administrator's Off ice	180	305	305	305	305
Total	180	305	1,070	1,260	1,325



10,575 SF REF PLAN

**(2) Nursery**

(a) *Description.* The desirable group size for the nursery is six to eight children, including babies and toddlers of up to two years. Two adults per nursery are required to supervise, prepare bottles and food, and change diapers and clothing. Separate rooms are desirable for children less than one year old, and for those from one to two years old. Allow 35 sq. ft. per child.

(b) *Space Allocation.* See Table 7 - 24.

(c) *Relationships.* The nursery should be adjacent to the preschool area and main REF entrance.

**(3) Preschool Area**

(a) *Description.* The preschool area should accommodate a group size of 15 - 20 children, ages 3 - 5, and three teachers. If possible, separate areas for two and three year olds, and four and five year olds, should be provided.

(b) *Space Allocation.* See Table 7 - 24.

(c) *Relationships.* The preschool area must be adjacent to an outdoor play area, near the nursery and main REF entry.

**(4) Elementary Areas**

(a) *Description.* The elementary age area should accommodate 15 - 25 students of ages six to eleven, and 2 - 3 teachers. Spaces must encourage free movement, flexible arrangement, and working in small groups. Separate areas are advisable for six to eight-year olds, and nine to eleven-year olds.

(b) *Space Allocation.* See Table 7 - 24.

(c) *Relationships.* Elementary age areas should have convenient access to REF entry and restrooms, and must have a direct fire exit to an outdoor play area.

**(5) Junior High/High School Age Area**

(a) *Description.* Separate but flexible areas for discussions, study, and workshops are recommended. Junior high classes for students ages 12 - 14 should have 12 - 15 students per class; senior high groups, ages 15 - 18, should have 15 - 25 students per class. Students are usually involved in large group activities such as dramatics, creative arts, singing, lectures, slides, and movies. For each group there should be one or two teachers.

(b) *Space Allocations.* See Table 7 - 24.

(c) *Relationships.* These areas should be convenient to REF entry and restrooms.

**(6) Adult/Young Adult Areas**

(a) *Description.* Adult/young adult areas should provide space for study, work, instruction, and discussions. Part of the adult area may be designed as a lounge with a residential quality. A work space for crafts and hobbies is also recommended. Spatial flexibility should be a major consideration, permitting usage by a variety of age groups, and group sizes, with the average being 15 to 25 persons.

(b) *Space Allocation.* Use same space as Junior High/High School Age area.

(c) *Relationships.* Classrooms should be convenient to REF entry and restrooms.

**(7) Resource Center**

(a) *Description.* The resource center should have space for activities including: individual and small group study, informal gatherings of small groups, browsing, reading, casual conversation, and use of resource materials. In most cases, the resource center is not supervised by a full-time resource librarian. The secretary/receptionist is generally responsible for visual supervision.

(b) *Space Allocation.* See Table 7 - 24.

(c) *Relationships.* The resource center should be adjacent to, and visually monitored by, the REF's secretary/receptionist. Convenient access to classrooms, administration, and the building entry is highly desirable.

**d. Outdoor Areas**

**(1) Outdoor Worship Areas and Courtyards**

(a) *Description.* Outdoor worship areas and courtyards should take advantage of existing trees and favorable views. Worship areas should be well defined but easily accessible from other outdoor public areas. Courtyards (for meditation) should be more intimate and confined.

(b) *Space Allocation.* Outdoor worship areas and courtyards are optional, and should be based on projected use and local climate conditions.

(c) *Relationships.* Outdoor worship areas should be directly accessible from the building and convenient to other outdoor public areas. Distance from noise sources such as streets is desirable. Courtyards are useful near the chaplains office, teaching and assembly areas.

**(2) Outdoor Activity Areas**

(a) *Description.* These areas include a plaza (at the main entrance) for outdoor gatherings before and after center activities, and outdoor activity area for the activity room and assembly/classroom, and play areas for preschool and elementary children.

(b) *Space Allocations.* The plaza should be 5% to 10% of the gross area of the building. The activity area should be approximately the same size as the activity room and assembly/classroom. Play areas should allow 150 sq. ft. per child.

(c) *Relationships.* The plaza should be adjacent to the main building entrance and drop-off area. The activity area should be adjacent to the activity room or assembly/classroom with convenient access to restrooms and public circulation. Play areas should be directly accessible from preschool and elementary areas, and isolated from streets and other public areas.

# Child Development Service Facilities

	<u>No. of Children</u>	<u>Space Allowance GSF/child</u>
Child Care Facilities	20% of the number of married military families	75

- Improving the Quality of Life for military personnel and their families: developmental services which reduce the conflict between parental responsibilities and unit mission requirements.
- Extension of the family: the provision of services which support the child rearing responsibilities of the parents and serve as a supplement to, not a substitute for, the family as the primary agent for the care and development of the child.
- Aid to development: developmental services that promote the child's physical, social-emotional, and intellectual development.

- Full Day care - designed to meet the needs of working parents requiring child development services on a regularly scheduled basis, 5 - 11 hours per day.
- Part Day care - to provide child development services on a regularly scheduled, part-day basis.
- Hourly Care - to meet the needs of parents requiring short term child care services on an intermittent basis.

- Center-based care - providing structured, age-appropriate group experiences within neighborhood or more centralized installation facilities.
- Quarter-based care - offering a family atmosphere for limited numbers of children, within certified homes in government quarters.
- Supplemental child care options - possibly including approved baby-sitter information/referral, parent co-ops, child development programs sponsored by private organizations, MWR convenience operations, and contracted services.

Dealing primarily with the development of facilities for center-based care, the child activity spaces in these centers are organized around an architecturally defined Home Base. The number of children in each Home Base is determined by staffing ratios as they relate to the age of the children served. Two (sometimes three) Home Bases are paired around common spaces. In this way, a small group of children have a sense of identity and of place within the larger facility.

### a. Home Base Activity Spaces

### (1) Book and Quiet Area

- (a) *Description*. This area should be a well-defined area with soft surfaces and natural lighting.
- (b) *Space Allocation*. See Table 7 - 28.
- (c) *Relationships*. Screen this area from high activity and high noise producing areas.

## (2) Imaginative Play

- (a) *Description.* Provide a minimum of two areas, one that is concrete such as a play house and one that is ambiguous. Provide furnishings that can be altered by the children.
- (b) *Space Allocation.* See Table 7 - 28.
- (c) *Relationships.* Buffer from circulation.

### (3) Science/Nature

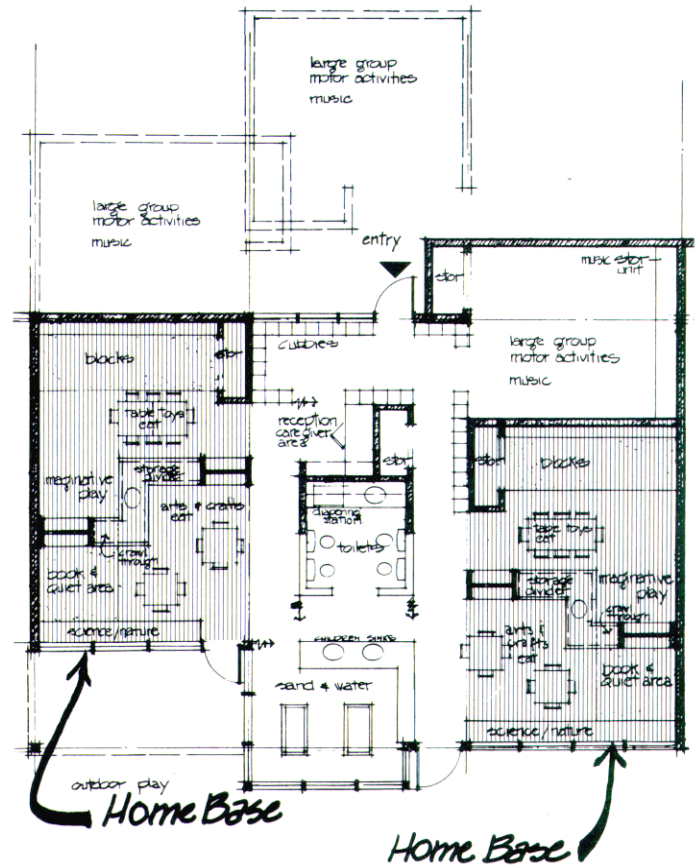
- (a) *Description.* Provide a sunny area or partial greenhouse for animals, plants, and physical science materials.
- (b) *Space Allocation.* See Table 7 - 28.
- (c) *Relationships.* Locate this area on the east or southeast side in good natural light. Separate or buffer it from more active areas.

#### (4) Table Toys

- (a) *Description.* This area is devoted to storage and work surfaces for small manipulative toys and games.
- (b) *Space Allocation.* See Table 7 - 28.
- (c) *Relationships.* This area may serve as a buffer between highly active and quiet activity areas.

## (5) Blocks

- (a) *Description.* This area should accommodate either individuals or groups of 6 - 8 children playing with blocks and building toys or projects. In larger centers, provide a separate semi-enclosed woodworking area.
- (b) *Space Allocation.* See Table 7 - 28.
- (c) *Relationships.* Separate from the book and quiet area and other quiet activity areas.



### (6) Eating/Cooking Areas

- (a) *Description.* These are spaces which always double function with other suitable activity spaces. They should be home-like and full of natural light.
- (b) *Space Allocation.* See Table 7 - 28.
- (c) *Relationships.* Eating areas should be adjacent to main circulation.

### (7) Napping Places

- (a) *Description*. Include provisions for napping within either large common spaces or dispersed within home base activities.
- (b) *Space Allocation*. See Table 7 - 28.
- (c) *Relationships*. Easily accessible to toilets.

### (8) Crib Spaces for Infants

- (a) *Description.* Provide crib spaces that are acoustically controlled, but visually connected and physically accessible from other infant areas.
- (b) *Space Allocation.* See Table 7 - 28.
- (c) *Relationships.* Locate this area adjacent to the diapering area.

**(9) Diapering Station**

- (a) *Description.* Provide an area that is quiet, protected from drafts and infant-scaled.
- (b) *Space Allocation.* See Table 7 - 28.
- (c) *Relationships.* Locate the diapering area adjacent to the crib space.



## b. Common Spaces

### (1) Sand Play and Water Play

(a) *Description.* Provide an area with waterproof wall and floor materials for tactile experience with sand and water.

(b) *Space Allocation.* See Table 7 - 28.

(c) *Relationships.* Locate near to arts and crafts, science/nature area and child bathrooms.

### (2) Arts and Crafts

(a) *Description.* Provide an open, airy space for arts and crafts in which both structured and unstructured activities can take place.

(b) *Space Allocation.* See Table 7 - 28.

(c) *Relationships.* Area should be adjacent to, but buffered from, circulation routes and other noisy activities.

### (3) Music/Media/Manipulative

(a) *Description.* This area should be a place for unself-conscious musical expression (either individually or in small groups), viewing of audio visual materials, and playing with manipulative toys that require open floor space.

(b) *Space Allocation.* See Table 7 - 28.

(c) *Relationships.* Locate adjacent to large group motor activities area in order to accommodate larger groups.

Table 7 – 28 Recommended Space Allocation for Child Development Service Centers-Activity Spaces

Sub-space Home Base	Size (SF) based on Age Group and Size of "Home Base" <sup>1</sup>			
	Infants SF/10	Toddlers SF/16	Preschoolers SF/20	Composite SF/15
Book and Quiet Area	X	42	48	64
Imaginative Play	-	46	64	88
Science/Nature Area	X	X	X	52
Table Toys	X	68	142	224
Blocks	X	60	70	80
Eating/Cooking Area	(115) <sup>2</sup>	X	X	90 <sup>4</sup>
Napping Places	-	X	X	-
Crib Spaces	235 <sup>3</sup>	-	-	-
Diapering Station	40	X	-	-
	275	216	324	598
Common Spaces	SF/20	SF/52	SF/40	SF/30
Sand and Water	X	160	X	X
Arts and Crafts	X	108	200	200
Music/Media/Manipulative	-	X	120	100
Large Group/Motor Activities	-	224	256	218
Workbench	-	-	X	X
Open Carpet/Platform Crawl	110	-	-	-
Wheel Toys	82	-	-	-
Toilets	16	64	64	45
Cubbies	16	102	128	96
Reception/Caregiver Area	40	40	40	40
	379	698	808	699

X means included as part of another suitable space.

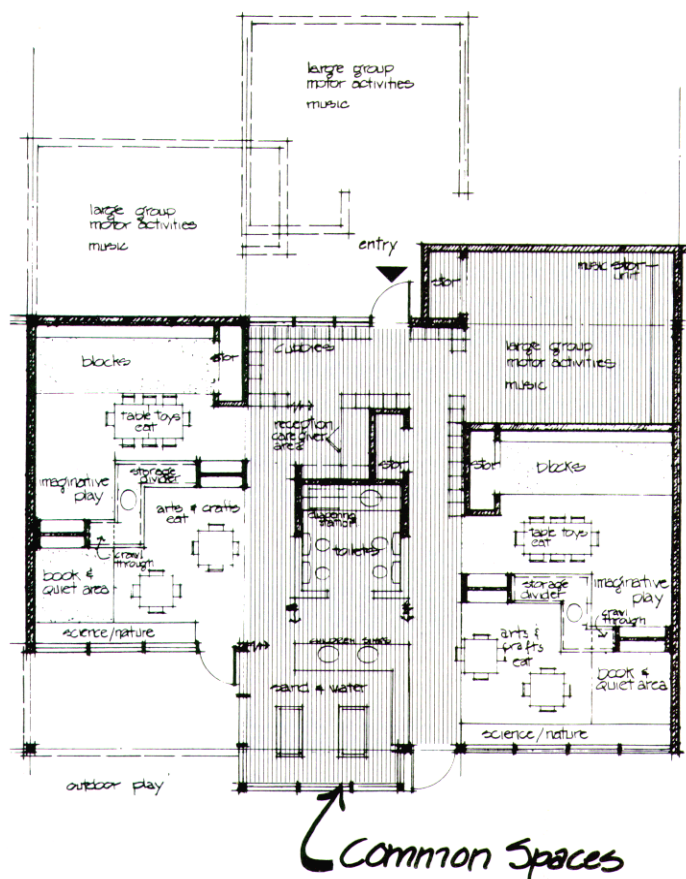
- means not included.

<sup>1</sup>Figures are given in this summary table for infants, toddlers, preschool-age children and composite (i.e., school-age and preschool program children combined). See DG 1110-3-143 in regard to these and special mixed age modules for hourly care and centers for fewer than 60 children. These figures do not refer to Family Child Care Homes.

<sup>2</sup>Serves 20 infants rather than 10 since eating for infants is a common space activity.

<sup>3</sup>Based on the provision of one portable crib for every child served.

<sup>4</sup>Additional space for eating is included in other suitable activity spaces.



#### (4) Large Group/Motor Activities Areas

(a) *Description.* Provide a flexible area for running, dancing, tumbling and other motor activities for toddlers, preschoolers, and school age children.

(b) *Space Allocation.* See Table 7 - 28.

(c) *Relationships.* Provide easy access to outdoor play area. Should be near entrance to child activity areas in order to serve as a gathering place first thing in the morning and at the end of the day.

#### (5) Workbench

(a) *Description.* Accommodate 1 to 3 children with work surfaces, child-accessible storage, and controlled adult-accessible storage.

(b) *Space Allocation.* See Table 7 - 28.

(c) *Relationships.* Separate from quiet areas. This area is often provided as part of the large group/motor activities area.

#### (6) Open Carpet/Platform Crawl

(a) *Description.* A carpeted enclosed area with platforms for crawling adjacent to carpeted, open area for infant stimulation activities.

(b) *Space Allocation.* See Table 7 - 28.

(c) *Relationships.* Locate adjacent to the infant Home Base, especially the diapering station and wheel-toy area. Other activities should be visible.

#### (7) Wheel Toys

(a) *Description.* Provide a hard-surfaced area for push-pull toys, riding toys, swings and other toys that require an open area.

(b) *Space Allocation.* See Table 7 - 28.

(c) *Relationships.* Separate from quiet activities.

#### (8) Child Toilet Areas

(a) *Description.* Provide easily accessible, fairly open bathrooms that contain child-scaled fixtures or adult fixtures that can be easily used by children.

(b) *Space Allocation.* See Table 7 - 28.

(c) *Relationships.* Toilet areas should be easily accessible from outdoor play spaces and adjacent to the cubby clusters.

#### (9) Cubbies

(a) *Description.* Cubby clusters should be a convenient and child-accessible place for children to store their clothing and belongings.

(b) *Space Allocation.* See Table 7 - 28.

(c) *Relationships.* Locate cubby clusters for each "home base" adjacent to main circulation route from entry areas.

#### (10) Reception/Caregiver Area

(a) *Description.* Provide work space and storage for caregivers near the entrance to the child activity spaces.

(b) *Space Allocation.* See Table 7 - 28.

(c) *Relationships.* Provide an overview of most activities in the home base.

## c. Administration Spaces

### (1) Parent Area/Lobby

(a) *Description.* Provide an informal and home-like parent area/lobby in each CDS facility. Comfortable seating should be available.

(b) *Space Allocation.* See Table 7 - 29.

(c) *Relationships.* Immediately adjacent to the entry and main circulation.

### (2) Reception Area

(a) *Description.* Provide work-space for a clerical/bookkeeper and a receptionist/cashier in a home-like, informal atmosphere.

(b) *Space Allocation.* See Table 7 - 29.

(c) *Relationships.* Adjacent to the entry, main circulation and offices, with a direct view of isolation.

### (3) Offices

(a) *Description.* The number of offices needed varies according to the size of the facility but generally includes a director's office and administrative support space. Large centers also include an additional office for either the CSS coordinator and/or program director(s).

(b) *Space Allocation.* See Table 7 - 29.

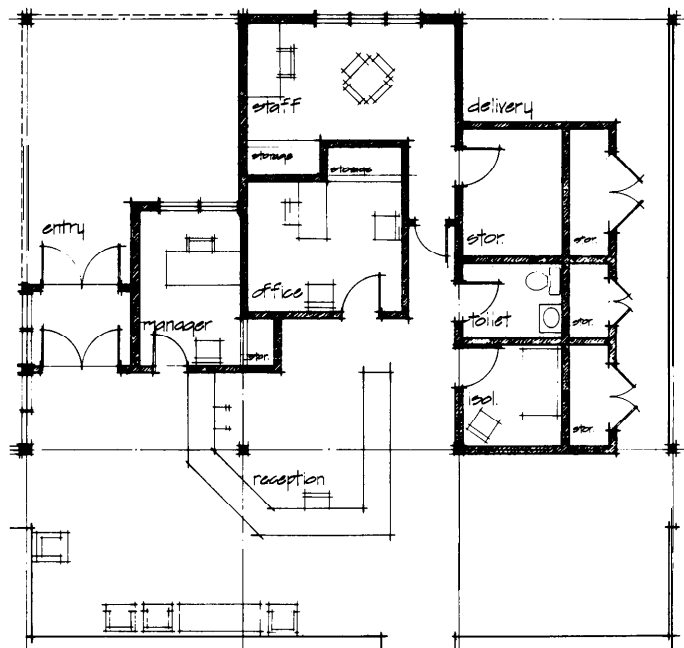


Table 7 - 29 Recommended Space Allocation for Child Development Service Centers - Administration and Support Spaces

Administration Module	Size (SF) based on the number of children served <sup>1</sup>			
	Small	Medium	Large	Mini-Center
Reception	160	160	60	96
Parent Area/Lobby	210	210	220	
Offices	185	215	386	240
Staff Lounge/Workroom	130	140	280	
Central Storage	92	124	172	36
Isolation	60	64	64	--
Staff/Public Toilets	90	90	192	130
Total	927	1003	1474	502
<b>Support Module</b>				
Kitchen <sup>2</sup>	225	352	560	240
Delivery	35	80	120	--
Laundry	54	54	128	48
Maintenance/Janitor's Space	27	27	81	
Mechanical Equipment Room	240	330	700	144
Total <sup>3</sup>	341	513	889	288

1. Areas are based on illustrative CDS Facilities Designs of the following sizes: Small--122 children; Medium--198; Large--303, Mini-Center--60.

2. Includes food preparation area, storage pantry, trash space.

3. Not including Mechanical, which is an addition to the sq.ft./child allowance in DOD 4270.1-M.

(c) *Relationships*. Adjacent to the reception area and parent area/lobby. Director's office should have good visual contact with the entry and with activity areas.

#### (4) Staff Lounge/Workroom

(a) *Description*. Provide a comfortable, separated (but not isolated) area for any staff activities which require privacy and quiet, such as planning the curriculum.

(b) *Space Allocation*. See Table 7 - 29.

(c) *Relationships*. Locate near but visually isolated from office area, circulation and other public areas.

#### (5) Central Storage

(a) *Description*. Provide a central storage for resources used in developing curriculum as well as art supplies, audio-visual materials and shared resource materials.

(b) *Space Allocation*. See Table 7 - 29.

(c) *Relationships*. Centrally located near office area and staff lounge/workroom.

#### (6) Isolation Area

(a) *Description*. Provide a pleasant, home-like space adjacent to the reception/entry area for ailing children who are waiting for their parents.

(b) *Space Allocation*. See Table 7 - 29.

(c) *Relationships*. Locate adjacent to the reception area and toilets.

#### (7) Adult Toilets

(a) *Description*. Provide convenient bathrooms for staff and visitors.

(b) *Space Allocation*. See Table 7 - 29.

(c) *Relationships*. Near entry, office area and staff lounge/workroom.

### d. Support Spaces

#### (1) Kitchen

(a) *Description*. The kitchen should be centrally located with respect to the child activity spaces and contain at least three work stations: receiving, food storage, and cooking and clean-up.

(b) *Space Allocation*. See Table 7 - 29.

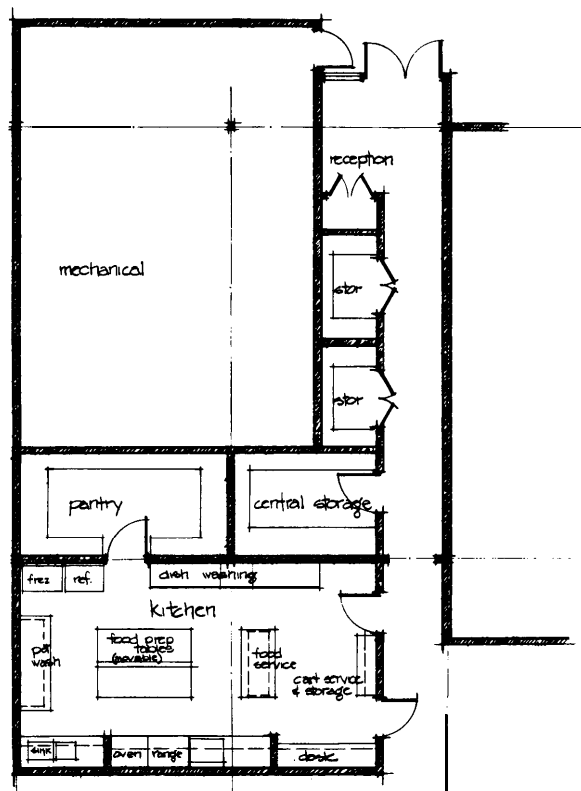
(c) *Relationships*. Adjacent to the main circulation path to child activity spaces and to receiving.

#### (2) Laundry

(a) *Description*. Provide an efficiently equipped and acoustically buffered laundry area close to infants' and toddlers' areas.

(b) *Space Allocation*. See Table 7 - 29.

(c) *Relationships*. Centrally located with respect to infant and toddler activity spaces.



**(3) Maintenance/Janitor's Spaces**

(a) *Description.* Provide a closet with a deep sink and space for pails, mops, vacuums and related cleaning supplies.

(b) *Space Allocation.* See Table 7 - 29.

(c) *Relationships.* Locate along the major circulation path.

**(4) Mechanical Equipment Room**

(a) *Description.* Provide space for mechanical and electrical systems in an efficient location.

(b) *Space Allocation.* In each CDS facility, provide 3.3% of the gross square footage (net assignable space plus non-assignable multiplier).

(c) *Relationships.* Centrally located, but not interfering with child activity spaces.

**e. Outdoor Activity Spaces****(1) Porches and Decks**

(a) *Description.* Provide sheltered outdoor activity spaces with a quick-drying surface and a favorable sun orientation.

(b) *Space Allocation.* Provide 50 sq. ft. minimum, or 1 sq. ft. per child. (In calculating gross square footage, covered outdoor areas are counted at 50% their actual size.)

**(2) Play Yards for Infants, Toddlers, Preschool-Age and School-Age Children**

(a) *Description.* Provide outdoor play yards for each age group that are developmentally appropriate for the age of the children served. All play yards should have direct access to the indoor activity areas they respectively serve. Separate the play yards of older children from those of younger children.

(b) *Space Allocation.* Provide a minimum of 50 sq. ft. per infant, 100 sq. ft. per toddler, and 100 sq. ft. per preschooler or school-age child (200 sq. ft. per child is recommended).

(c) *Relationships.* Locate each outdoor activity with easy and direct access to its respective indoor area, particularly the child toilet areas. Separate infant areas from the active play spaces of older children. Locate toddler areas, if possible, between infant and preschool areas. Locate play yards for school-aged children close to community-shared public park space and playing fields, if possible.

**f. Outdoor Pedestrian, Vehicular and Service Areas****(1) Port Cochere**

(a) *Description.* A roofed area should be provided in front of the entry.

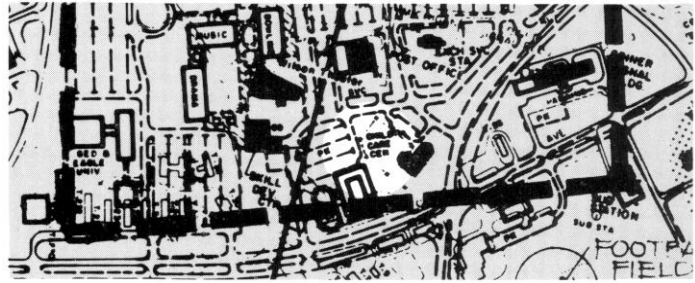
(b) *Space Allocation.* Provide 300 sq. ft. (In calculating the gross square footage of the building, calculate this area at 50% of its actual size.)

(c) *Relationships.* Adjacent to the entry, parent area/lobby and reception.

**(2) Vehicular Circulation, Parking and Drives**

(a) *Description.* On-site paved roadways should include bus drop-off points, parking and service areas and should provide interesting views into play yards.

(b) *Space Allocation.* Provide one staff space per 1.25 staff and one parent/visitor space per 12 children. Provide short term parking spaces, based on one space per 20 children. See DG 1110-3-143 and the ANSI criteria for other requirements.



## 7 - 9

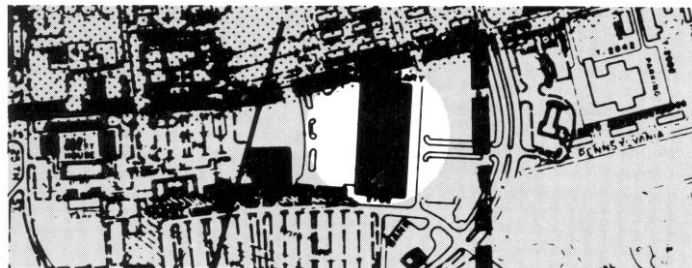
## Children's Outdoor Play Environments

TM 5-803-11

The purpose of the tiered park system is to establish a "specific plan for play" that supports a range of needs for intellectual, social and physical play. The planning process for a tiered park system must account for the diverse needs of the military community as well as the physical constraints of the installation. In addition to a review of the play needs for each family housing area, existing play areas (both traditional and non-traditional such as vacant lots) are rated according to their ability to support play. Suitable sites for play are then identified, according to the availability of contiguous areas and proximity to housing, community amenities and circulation paths, among other factors. Location of Community Activity Centers should also be closely related to this park system, wherever possible.

Recommendations for improvement are then made by specifying a need for one or more of the following levels of service:

- Tier I Inter Service Regional, provides an area of at least 250 acres.
- Tier II Installation Wide, supports base-wide activities such as swimming and spectator games in an area of 100 to 200 acres.
- Tier III Community and Recreation Services, parcels of 8 to 30 acres serving several family housing areas for league athletic events and other community activities.
- Tier IV Family Housing Area Parks, sited at the center of a housing area preferably along a network of paths, with an area of 3 to 5 acres each.
- Tier V Immediate Neighborhood Parks, 1/5 to 1 acre sited along major paths used by children and adults, with provision for shelter, benches, etc.
- Tier VI Home-based Play Areas, providing play opportunities for young children in their own yards.
- Tier VII Link Parks, an area 50 to 200 feet wide connecting family housing units within the housing area through a system of paths.



## 7 - 1 0

# Commissary Stores

Table 7 - 30 DOD Space Authorization for Commissary Stores

Volume of Sales Per <sup>2</sup> Month in Dollars	Area (Gross SF) <sup>1</sup>	
	CONUS	Overseas
15,000 - 25,000	4,000	6,000
75,001 - 100,000	13,500	20,250
150,001 - 200,000	21,000	31,500
300,001 - 350,000	34,500	51,750
500,001 - 600,000	51,000	76,500
800,001 - 900,000	73,500	110,250
1,100,001 - 1,200,000	96,000	
1,500,001 - Over	122,500	

### Note

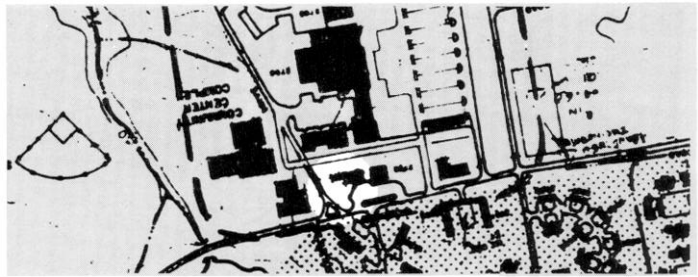
<sup>1</sup>The square foot gross area includes all commissary store requirements. (No additional warehouse is required.)

<sup>2</sup>Above space allowance is based on display and handling areas required for value of food dollar as of 1 July 1970.

Commissary stores are central to the life of the post community, as one of the primary retail services needed. Space authorization is found in Table 7 - 30. These stores should be considered for inclusion within or adjacent to Main Post Community Activity Centers, as mutually reinforcing activity generators and service providers to the whole post community. Parking for commissary stores can effectively be shared with other community facilities, particularly for accommodating large-scale after-hours requirements when the stores are closed.

## 7 - 1 1

## Credit Union Facilities



Although credit unions are private organizations which are not under the direct control of the Department of Defense, a properly chartered credit union may be established on any military installation to serve military personnel, their dependents and other personnel as permitted in the approved bylaws of the credit union. If the credit union on an installation refuses or fails to permit unrestricted membership of installation personnel, it will be denied free use of installation facilities. Normally, credit unions will be part of the Main Post Community Activity Center. Where space in the center is not available, it will be provided in a nearby convenient area.

Space authorizations for credit unions are given in Table 7 - 31. The total factors are the sum of factors determined by the membership, assets, transactions, accounting method, and employees for the individual credit union, as given in Table 7 - 32. The square foot allowances may be increased by 10 percent to allow for future business expansion.

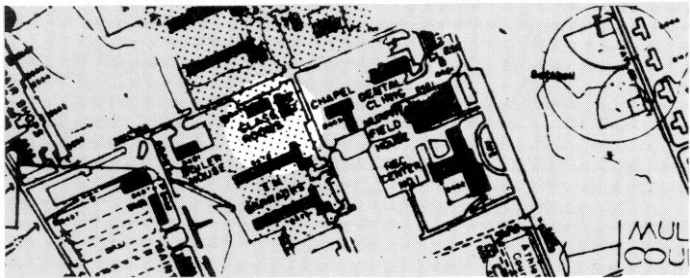
Table 7 - 31 DOD Space Authorization for Credit Unions

Factor Totals	Area (Gross SF)
Min.	800
6	1,300
8	2,200
10	2,800
12	3,500
14	4,300
16	5,200
18	6,200
20	8,200
22	10,200
24	12,200

Table 7 - 32 Factors for Space Requirements - Credit Unions

1. Members	Factor
0 - 1,000	1
1,000 - 2,500	2
2,501 - 7,500	3
7,501 - 12,000	4
12,001 - 20,000	5
Over 20,000	6
2. Assets	Factor
0 - \$ 100,000	1
\$ 100,001 - 500,000	2
500,001 - 1,500,000	3
1,500,001 - 5,000,000	4
Over 5,000,000	5
3. Transactions Per Day	Factor
0 - 99	1
100 - 299	2
300 - 499	3
500 - 749	4
750 - 999	5
4. Employees	Factor
2- 5	1
6- 9	2
10 - 13	3
14 - 17	4
18 - 21	5
22 - 25	6
Over 25	7
5. Accounting	Factor
Machines	1
Manual	2





## 7 - 1 2

# Education Centers

DG 1110 - 3 - 112

Table 7 - 33 DOD Space Authorization for Education Centers

Military Strength	Area (Gross SF)	OJT <sup>1</sup>	CAC <sup>1</sup>
Up to 250	Accomodate in other facilities	-	-
251 - 1,000	4,125	300	500
3,001 - 5,000	13,500	700	500
7,001 - 10,000	19,800	1,200	500
15,001 - 20,000	31,800	2,200	500
25,001 - 30,000	40,500	3,200	500
40,001 - 50,000	55,000	4,200	500
50,000 - 60,000	60,000	4,700	500

<sup>1</sup>All newly constructed Education Centers should provide additional office space for the base personnel who manage the On-The-Job Training (OJT) Program and the Career Advisory and Counseling (CAC) Section.

The Army Continuing Education System<sup>1</sup> provides voluntary educational opportunities primarily for active duty military personnel. The main intent of the program is to assist soldiers in the development of a career related to his or her specialty and to provide training that can be applied in post-service employment. The system also offers a basic level of educational opportunities toward, for example, completion of a high school equivalency diploma.

These instructional programs reflect the Army's concern for a wide range of educational needs and include the following:

- Basic Skills Educational Programs, in order to expand basic literacy skills.
- High School Completion Program, offering a State issued high school equivalency certificate or high school diploma.
- Associate, Baccalaureate and Graduate Degree Programs.
- Skill Development Programs, providing technically-oriented, vocational training.
- Language Programs, providing advanced language instruction, as well as English as a second language.
- Skill Recognition Programs, to assist the soldier in seeking recognition in the private sector for the skills he or she learned in the Army, through accreditation of military experience, Army apprenticeship program, certification, and accreditation of TRADOC Service Schools.

<sup>1</sup>These facilities are referred to as "Education Centers" in the DOD Construction Criteria and as "Army Continuing Education Systems Centers" (ACES) in the related design guide, DG 1110-3-112.

## **a. Staff Spaces**

(1) *Description.* Staff spaces include a director's office, administrators' office, information/registration/clerk/typist space and counselors' spaces. Both the director and administrator require an area for conferences. The clerical area serves clerks and typists as well as a registrar who provides visitor information.

(2) *Space Allocation.* See Table 7 - 34.

(3) *Relationships.* The director's office should be adjacent to the clerks', typists' and administrators' areas. Registrar and information spaces should be adjacent to the main entrance. Counselors should be as close as possible to the information and registration space.

## **b. Academic Spaces**

### **(1) Classroom, Lecture Room and Seminar Room.**

(a) *Description.* Provide separate space for general purpose classes, a larger space for testing, assemblies, films, public meetings, seminars, small classes and conferences.

(b) *Space Allocation.* See Table 7 - 34.

(c) *Relationships.* Locate these spaces adjacent to other academic spaces. The lecture room should be near the main entrance if possible so that visitors can easily locate the room.

### **(2) MOS Library**

(a) *Description.* This area provides storage and work-space for the use of MOS related material.

(b) *Space Allocation.* See Table 7 - 34.

(c) *Relationships.* The library should be adjacent to the "self-paced instruction" room and centrally located with respect to other academic spaces.

### **(3) Self-Paced Instruction**

(a) *Description.* This space is used for individual study of MOS-related and other educational material that involve audio-visual aids.

(b) *Space Allocation.* See Table 7 - 34.

(c) *Relationships.* Locate adjacent to the MOS library.

### **(4) Language Laboratory**

(a) *Description.* Provide an area for students to study foreign language tapes, make their own recordings and practice speaking.

(b) *Space Allocation.* See Table 7 - 34.

(c) *Relationships.* Locate in proximity to other academic spaces. Provide space for taping and for storage that is immediately accessible to the laboratory.

### **(5) Science Laboratory**

(a) *Description.* Provide laboratory space for physics, biology and chemistry. Separate but adjacent spaces are required for special projects and the preparation of materials and storage.

(b) *Space Allocation.* See Table 7 - 34.

(c) *Relationships.* Locate in proximity to other academic spaces.

### **(6) Testing Room**

(a) *Description.* Provide an area for testing and general purpose classes, including separate spaces for observation and grading (of examinations), and storage of extra furniture.

(b) *Space allocation.* See Table 7 - 34.

(c) *Relationships.* Locate near the classrooms and lecture rooms.

### **(7) Rehearsal/Recording Studio**

(a) *Description.* Provide an area for rehearsals of presentations and for video taping lectures.

(b) *Space Allocation.* See Table 7 - 34.

(c) *Relationships.* Locate near lecture and seminar areas. This room should be centrally located with respect to other academic areas.

Table 7 - 34 Recommended Space Allocation for Education Centers

Sub-Space	Size (Gross SF) based on Military Strength <sup>2</sup>		
	6,000	10,500	21,000
Staff Spaces	1,805	2,585	3,995
Director	230	230	230
Administrators (3)	170	345	520
Clerks (4)	115	230	460
Typists (4)	170	170	345
Registrar	115	115	115
Information and Storage	260	290	405
Counselors (17)	575	1,035	1,750
Reference	170	170	170
Academic Spaces	11,685	11,685	14,275
Classrooms (4 rooms)	1,725	1,725	3,450
Lecture rooms	1,725	1,725	1,725
Seminar rooms (5 rooms)	1,295	1,295	2,160
Self-Paced Instruction	865	865	865
MOS Library	865	865	865
Language Lab	865	865	865
Science Lab	1,725	1,725	1,725
Testing Room (2 classrooms)	2,190	2,190	2,190
Rehearsal/Recording Studio	430	430	430
Vocational Training Spaces <sup>1</sup>		8,365	14,405
Auto Mechanics Shop	-	-	6,730
Masonry Shop	-	-	4,770
Communications/Industrial			
Electronics Shop	-	-	2,905
Auto Body Repair Shop	-	5,835	-
Heating/Refrig./AC Shop	-	2,530	-
Support Spaces	3,340	3,925	5,070
Staff Lounge	200	210	275
Student Lounge	740	785	1,005
Vending Area	405	430	545
Training Aids Preparation	540	575	730
Toilets - men	470	650	805
women	180	420	610
Receiving/General Storage	670	710	915
Janitor Closet	140	145	185
Total Education	16,830	26,560	37,745

<sup>1</sup>The list of vocational training spaces presented here is exemplary of a typical building program. See Table 7 - 35 for a complete list of square footage requirements for each type of shop, at a given occupancy load.

<sup>2</sup>A factor of 15% to translate net square footage into gross square footage has been included in all figures, instead of appearing as a separate line item added to the net total, as is done in the ACES Design Guide.

### c. Vocational Training Spaces

(1) *Description.* Provide a laboratory space for lectures, demonstrations and experimentation for vocational training activities such as:

- Heating/Refrigeration/Air Conditioning
- Construction Electrician
- Communications/Industrial Electronics
- Masonry
- Carpentry
- Plumbing
- Diesel Mechanics
- Auto Mechanics
- Welding
- Auto Body Repair
- Small Engine Repair

Each of these spaces require ample general storage (and possibly secure storage) for tools and an area for conferences.

(2) *Space Allocation.* See Table 7 - 35.

(3) *Relationships.* These shops require their own service entrances. The heating/refrigeration/air conditioning shop should be near the plumbing and construction electrician shop. The communication/industrial electronics shop should be near the construction electrician shop. The masonry shop should be in proximity to carpentry, plumbing and H/R/AC. The diesel shop should be adjacent to the auto mechanics and plumbing shops. The auto body repair shop should also be closely associated with the building.

Table 7 - 35 Space Allocation for Vocational Training Spaces

Sub-Space	Size (Gross SF) based on Occupancy Load (No. of Persons)
	20
Heating/Refrigeration/ Air Conditioning	2,530
Construction Electrician	2,815
Communications/Industrial Electronics	2,905
Masonry	4,770
Carpentry	5,375
Plumbing	2,820
Diesel Mechanics	3,650
Auto Mechanics	6,725
Welding	5,145
Auto Body Repair	5,840
Small Engine Repair	4,225

### d. Support Spaces

#### (1) Staff Lounge and Student Lounges

(a) *Description.* Provide separate lounges for staff and students to use for informal meetings, lunches and relaxation.

(b) *Space Allocation.* See Table 7 - 34.

(c) *Relationships.* Both staff and student lounges should be near the vending area. The staff lounge should be near staff offices. At least one student lounge should be near the main entrance, for visitors to use. Several small lounges are often used more successfully than a single, large centralized lounge.

#### (2) Vending Area

(a) *Description.* Provide an area for vending machines, an eating area for snacks and a separate space for storage.

(b) *Space Allocation.* See Table 7 - 34.

(c) *Relationships.* Locate the vending area adjacent to the student lounge and staff lounge.

#### (3) Training Aids Preparation

(a) *Description.* Provide an area in which graphic materials can be prepared and duplicated.

(b) *Space Allocation.* See Table 7 - 34.

(c) *Relationships.* Locate near the staff offices and receiving room.

#### (4) Toilets

(a) *Description.* Provide toilets for staff and students.

(b) *Space Allocation.* See Table 7 - 34.

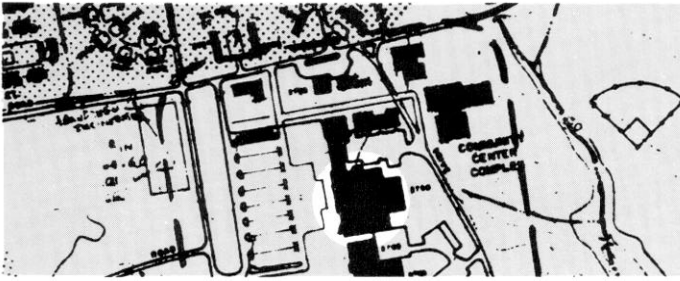
(c) *Relationships.* Toilets should be easily accessible from academic spaces, the main entrance and lounges.

#### (5) Receiving and General Storage

(a) *Description.* Provide an area for receiving, unpacking and temporary storage of educational materials.

(b) *Space Allocation.* See Table 7 - 34.

(c) *Relationships.* Receiving should be immediately accessible from the service entrances and close to staff spaces.



## 7 - 13

# Exchange Facilities

Table 7 - 36 DOD Space Authorization for Exchange Amusement Centers

Military Strength	Area (Gross SF) <sup>1</sup>
501 - 1,000	1,200
1,001 - 3,000	1,800
3,001 - 5,000	2,400
5,001 - 7,000	3,800
7,001 - 10,000	5,000
10,001 - 15,000	6,500
15,001 - 20,000	8,500
20,001 - 25,000	11,000
25,001 - 30,000	12,800
For each add'l 5,000	Add 1,800

<sup>1</sup>If the amusement center is not located contiguous to a branch exchange, cafeteria or snack bar, space for a feeding facility, if required, shall be provided out of the space authorized for amusement centers.

Table 7 - 37 DOD Space Authorization for Branch Exchanges

Installation Military Strength	Number of Authorized <sup>1</sup> Branch Exchanges
2,500 - 5,000	1
5,001 - 7,500	2
7,501 - 10,000	3
For each additional increment of 2,500 or portion thereof	1

<sup>1</sup>A gross area of 7,000 square feet is authorized for each branch exchange, however, space allowances for individual branch exchange facilities may be adjusted upward or downward as long as the total space authorized for branch exchanges is not exceeded. Branch exchange facilities may be utilized for any of the authorized exchange activities or service outlets as required.

The exchange facilities authorized by DOD Directive 1330.9 include branch exchanges, cafeterias, snack bars and stands, service stations, retail stores and amusement centers. The exchange may also provide services (as adjuncts to the main retail store) such as barber shop, coin operated laundry, optical shop, shoe repair and tailor. Central administrative facilities shall be provided according to the DOD criteria. Administrative space required for an individual exchange facility is concluded as part of the space criteria for the individual facility.

## a. Amusement Centers

(1) *Description.* Amusement centers are entertainment activities which combine coin operated games and refreshments. They usually include a game area (e.g., pool tables, pinball and skill games), food and drink vending machines, a limited snack counter (in larger activities), and toilets.

(2) *Space Allocation.* See Table 7 - 36.

(3) *Relationships.* Amusement centers may be provided as independent activities or operated in conjunction with a branch exchange, cafeteria, or snack bar. Integrated with Community Activity Centers, their functions should be related to comparable and compatible Morale Support Activities, such as social recreation and bowling, and duplication of service eliminated.

## b. Branch Exchanges

(1) *Description.* Branch exchanges provide local retail service to sub-areas of installations.

(2) *Space Allocation.* See Table 7 - 37.

(3) *Relationships.* Locate branch exchange wherever necessary in order to provide convenient access throughout the installation. These locations should be coordinated and potentially integrated with Local Community Activity Centers, where appropriate service territory overlaps exist.

### c. Exchange Cafeterias, Snack Bars and Snack Stands

(1) *Description.* A cafeteria or snack bar may be provided in conjunction with the exchange main retail store, preferably as an element of the Community Activity Center. At installations with a military strength over 3,000 snack stands may be provided to supplement food exchange services.

(2) *Space Allocation.* See Table 7 - 38 and 7 - 39.

(3) *Relationships.* Snack bars, snack stands and cafeterias should be easily accessible and visible from areas of intense activity. They should be located to reinforce the attractive, multi-functional design of Community Activity Centers, and to serve the diverse range of users of the facilities.

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Table 7 - 38 DOD Space Authorization for Exchange Cafeterias and Snack Bars

Military Strength	Area (Gross SF)	
	CONUS	Overseas
0 - 500	1,850	2,200
501 - 1,000	2,700	3,200
1,001 - 3,000	5,400	6,300
3,001 - 5,000	7,400	8,000
5,001 - 7,000	9,300	9,800
7,001 - 10,000	10,700	11,300
10,001 - 15,000	12,600	13,300
15,001 - 20,000	16,800	17,800
20,001 - 30,000	18,600	19,600
For each add'l 5,000	Add 500	Add 500

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Table 7 - 39 DOD Space Authorization for Exchange Snack Stands

Military Strength	Number of Stations (900 GSF each)
3,001 - 5,000	1
5,001 - 10,000	2
10,001 - 20,000	3
20,001 - 30,000	4
For each add'l 5,000	Add 1

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## d. Gasoline, Car Wash, and Service Stations and Service Centers

(1) *Description.* Gasoline and service stations, service centers, supplemental gasoline stations and car wash facilities are provided on the basis of either installation military strength or the total number of vehicles registered to authorized customers.

(2) *Space Allocation.* See Table 7 - 40 and 7 - 41.

(3) *Relationships.* Gasoline, car wash and service stations may be located in Main Post Center complexes. Typically detached from other facilities and located at the entrance to, or edge of, the parking area. Their accommodation may be combined or coordinated with auto crafts shops. Convenient automobile access, non-interference and non-intrusion upon other functions are important siting considerations.

Table 7 - 40 DOD Space Authorization for Gasoline and Service Stations

Installation Military Strength	Or	Authorized Customer Registered Vehicles	Gasoline & Service Stations Area (Gross SF)	Service Centers Add'l Area (Gross SF)
0 - 500		0 - 300	600	-
501 - 1,000		301 - 600	1,740	-
1,001 - 3,000		601 - 1,800	2,160	380
3,001 - 5,000		1,801 - 3,000	2,830	950
5,001 - 7,000		3,001 - 4,300	3,250	1,140
7,001 - 10,000		4,301 - 6,100	4,140	2,100
10,001 - 15,000		6,101 - 9,100	4,560	4,300
15,001 - 20,000		9,101 - 12,200	6,500	4,610
20,001 and Up		12,201 and Up	9,750	4,800

Table 7 - 41 DOD Space Authorization for Car Wash Facilities

Installation Military Strength	Or	Authorized Customer Registered Vehicles	Number of Wash Bays	Service Centers Add'l Area (Gross SF)
800 - 3,000		500 - 1,800	1	720
3,001 - 5,000		1,801 - 3,000	2	1,180
5,001 - 7,000		3,001 - 4,000	3	1,640
7,001 - 10,000		4,001 - 6,000	4	2,100
10,001 - 15,000		6,001 - 9,000	5	2,560
15,001 - 20,000		9,001 - 12,000	6	3,020
20,001 and Up		12,001 and Up	7	3,480

## e. Main Retail Stores

(7) *Description.* The main retail store is the major non-food sales resource on the post. It comprises sales area, stock area, office space, toilets, and entrance facilities, as required.

(2) *Space Allocation.* DOD space authorization is determined by:

- The total number of married military sponsors (officers and enlisted personnel, excluding married enlisted personnel in overseas unaccompanied areas), their dependents and single officers (and in overseas commands the authorized civilian employees and their dependents).
- The number of single enlisted personnel. Married enlisted personnel in overseas unaccompanied areas are counted as single enlisted personnel.
- The number of retired military personnel (sponsors only) patronizing the exchange.
- The mission assigned to the military installation.
- Availability of family housing on and off the installation.
- Availability of comparable commercial shopping facilities.

(3) *Relationships.* As the major retail focus for the post community, the main exchange is a heavy usage generator and the Community Activity Center functions would greatly benefit from co-location with this facility. Convenient access routes to and from the main exchange entrance past other functional spaces will provide helpful exposure. Parking and other support facilities can be shared. Some specific exchange functions may be intermingled and consolidated with MSA and community facilities, to encourage more mutual interaction and attraction.

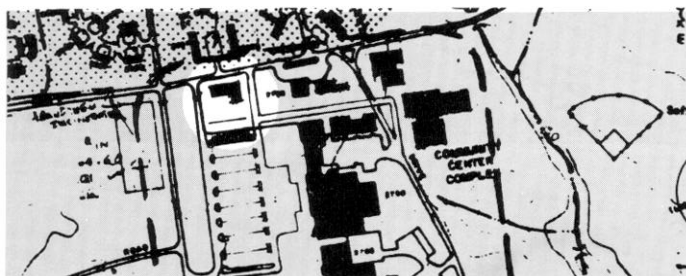
## f. Service Outlets

Outlet facilities for a variety of basic services are authorized in the Construction Criteria Manual, normally as adjuncts of the main retail store. They include the following facilities:

- Barber Shop
- Beauty Shop
- Laundry, Coin Operated
- Optical Shop
- Personal Services
- Portrait Studio
- Radio-TV repair
- Shoe Repair
- Tailor
- Valet
- Watch Repair

For detailed space authorizations and criteria for these facilities, see DOD 4270.1-M.





7 - 1 4

## Family/Community Service Centers

Table 7 - 42 DOD Space Authorization for Family/Community Service Centers

Military Strength <sup>1</sup>	Area (Gross SF)
0 - 100	Provide in other facilities
101 - 1,000	650
1001 - 3,000	1,150
3,001 - 5,000	1,500
5,001 - 7,000	2,500
7,001 - 10,000	2,750
10,001 - 15,000	3,000
Over 15,000	3,200

<sup>1</sup>Military strength includes active duty plus 25% of dependants.

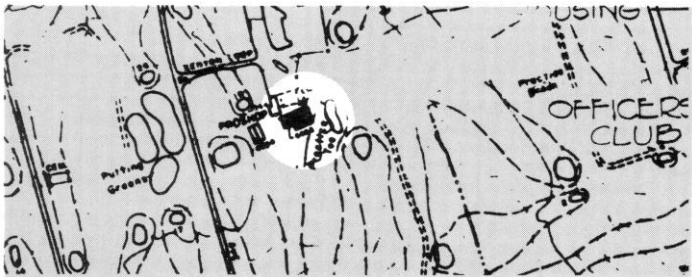
<sup>2</sup>For installations exceeding 7,000 military strength, an additional 900 square feet may be provided for a classroom.

Family/community service centers may be established as required to provide services to military members and their families. This assistance may include counseling about passports, voting, legal matters, insurance, military separation, retirement, careers, housing, personal financial management, transportation, loans, grants, social workers, emergency leave, handicapped children, etc. The facility will include space for reception, administration, household loan items, rest rooms, counseling rooms, waiting room, storage and conference room. Space allowances for family/community service centers are shown in Table 7 - 42.

Users of family/community service centers will benefit from the convenience of co-location of these facilities with other community facilities. However, as many of the services involved here are private or intimate in nature, it is appropriate to place them in a more secluded, less exposed position. At the edge of, or nearby, a Main Post Community Activity Center, or among its more quiet, administrative functional areas, are appropriate locations to consider.

# 7 – 15

## Golf Facilities



At installations where the necessary land is available for the purpose, and where there are no foreseeable operational requirements for the land, golf facilities may be provided as shown in Table 7 - 43.

The planning for a golf course should consider the amenity potential of juxtaposing housing and this large open green space. Community facilities may also benefit from adjacency to and overview of this green area. Golf club houses and other support facilities may, if the siting is convenient, be co-located or consolidated with the Main Post Community Activity Center. Facility sharing potentials exist in lounges, games, snack bar, and support spaces between golf and other active sports and social recreation functions.

Table 7 - 43 DOD Space Authorization for Golf Facilities

Military <sup>1</sup> Population	Golf Course <sup>2</sup> No. of Holes	Golf Club House <sup>3</sup> Area (Gross SF)	Equipment Bldg. <sup>3</sup> Area (Gross SF)
2,000 - 4,000	9	6,500	1,500
4,001 - 8,000	18	8,000	2,000
8,001 - 12,000	27	9,000	2,500
12,001 and Over	36	10,000	3,000

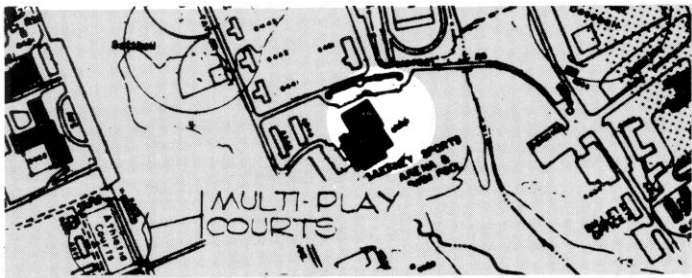
<sup>1</sup>Military population will consist of military strength plus 35% of their dependents and 25% of retired military personnel supported.

<sup>2</sup>A pitch-and-putt course shall be considered the equivalent of a golf course of the same number of holes.

<sup>3</sup>Separate facilities may be provided for each separate golf course, however, the total combined space shall not exceed these allowances.

<sup>4</sup>Additional sq.ft. for cart storage may also be included as required.

Note: Driving Range: Each military installation is authorized a driving range. Size as required.



7 - 1 6

# Gymnasiums and Physical Fitness Centers<sup>1</sup>

DG 1110-3-128

Table 7 - 44 DOD Space Authorization for Gymnasiums and Physical Fitness Centers

Military Population <sup>1</sup>	Area (Gross SF)
1 - 250	None, combine with Multipurpose Recreation Building
251 - 1,000	1 - 14,000 sq. ft. all purpose gym
1,001 - 3,300	1 - 21,000 sq. ft. gym
3,301 - 6,600 <sup>3</sup>	2 - 21,000 sq. ft. gyms
6,601 - 10,000	3 - 21,000 sq. ft. gyms
10,001 - 15,000 <sup>2</sup>	4 - 21,000 sq. ft. gyms

<sup>1</sup>Military population includes active duty plus 25% of their dependents.

<sup>2</sup>For each 3,300 above 15,000 an additional gymnasium of 21,000 sq. ft. may be provided.

<sup>3</sup>At installations over 4,000 a single large facility-Physical Fitness/Athletic Complex-may be provided.

Table 7 - 45 DOD Space Authorization for Physical Fitness/Athletic Complexes

Active Duty Military Strength	Area (Gross SF)
4,000 - 5,000	30,000
5,000 - 7,000	40,000
7,001 - 10,000	50,000
10,001 - 15,000	62,000
each additional 15,000	62,000

The Army Morale Support Activities program should provide a wide range of athletic and recreational activities in order to support the mental and physical well-being of

Army personnel, their families and other members of the military community. Physical fitness centers should augment existing sports facilities with well-rounded athletic programs accessible to all members of the military community. The centers must accommodate simultaneous use, by adults and dependent youth of both sexes, of all activity areas except lockers, showers, toilets, etc. The physical fitness center (category code 740 - 28) should be centrally located, able to accommodate large tournaments, open to military dependents. Barracks-related gymnasiums and other sports facilities (category code 740 - 34) are designed and located primarily for local service to troop units.

Major athletic and entertainment events create special problems in traffic control and parking accommodations. The siting of the physical fitness center should discourage heavy traffic flow through housing or community center areas, and minimize the impact of heavy traffic on installation arterials. Barracks areas generally incorporate adequate athletic facilities in the form of gymnasiums and outdoor playing courts. Facilities for dependents may be relatively limited, therefore these users are more in need of the center facility. The physical fitness center should be sited approximately equidistant from troop billeting and family housing, in order to encourage general utilization. The physical fitness center may be located together with, or convenient to, the Main Post Center because they serve complimentary and mutually reinforcing functions. However, space, access and parking requirements may not permit this co-location.

<sup>1</sup>This section also lists DOD requirements for Outdoor/ Indoor Swimming Pools, Indoor Handball/ Racquetball and/or Squash Courts, and Physical Fitness/Athletic Complexes.

Table 7 - 46 Recommended Space Allocation for Physical Fitness Centers

Sub-Space	Size (Gross SF) based on Military Population	
	7,000-10,000	10,000-15,000
<b>Activity Areas</b>	<b>43,260</b>	<b>55,030</b>
Gymnasium	23,230	23,230
Platform	2,070	2,070
Swimming Pool	11,560	18,260
Handball/Raquetball Courts	1,830	3,910
Exercise Rooms	4,570	7,560
<b>Staff Spaces</b>	<b>775</b>	<b>775</b>
Director's Office	175	175
Program Directors/Clerks' Office	400	400
Pool Office	200	200
<b>Support Spaces</b>	<b>7,205</b>	<b>7,900</b>
Trainer/First-Aid	280	280
Locker Rooms	1,655	2,130
Shower Rooms	605	765
Participants' Toilets	670	960
Sauna Room	230	230
Laundry	115	115
Equipment Issue Room	460	575
Lobby	1,725	1,380
Concession	230	230
Public Toilets	1,235	1,235
<b>Total Physical Fitness Center</b>	<b>51,240</b>	<b>63,705</b>

## a. Activity Areas

### (1) Gymnasium

(a) *Description.* At least four kinds of activities are considered in gymnasium design - spectator and non-spectator sports, entertainment events, and assemblies. Seating is required for entertainment events and spectator sports. Several non-spectator events may occur simultaneously. Space is also required for storage of miscellaneous equipment such as mats, standards and nets for tennis, volleyball, and the like.

(b) *Space Allocation.* See Table 7 - 44 and 7 - 47.

(c) *Relationships.* Lockers for men and women, gym storage and a service dock should be adjacent.

Table 7 - 47 Space Allocation for Gymnasium

Sub-Space	Size (Gross SF) based on Military Population	
	7,000-10,000	10,000-15,000
Gymnasium	22,770	22,770
Storage	460	460
<b>Total</b>	<b>23,230</b>	<b>23,230</b>

### (2) Platform

(a) *Description.* The platform will be used as a performance and staging area for big entertainment events. Space is also required for storage of lighting equipment, instruments, stage drapes and all other items related to the presentation of musical and/or theatrical performances.

(b) *Space Allocation.* See Table 7 - 48.

(c) *Relationships.* The platform must be an integral component of the gymnasium, preferably with direct access to storage and general circulation.

Table 7 - 48 Space Allocation for Platform

Sub-Space	Size (Gross SF) based on Military Population	
	7,000-10,000	10,000-15,000
Platform	1,380	1,380
Male Dressing Room	230	230
Female Dressing Room	230	230
Storage	230	230
<b>Total</b>	<b>2,070</b>	<b>2,070</b>

### (3) Swimming Pool

(a) *Description.* The swimming pool will be used for recreational activities including family swimming and individual fitness efforts. Activities also include competitive diving and swimming, with related spectator seating provision, as well as instruction in swimming, scuba diving, etc.

(b) *Space Allocation.* See Table 7 - 49 and 7 - 50.

(c) *Relationships.* The swimming pool should be accessible from the locker rooms and office area. Separate, "dry" access to the spectator seating area is also required.

Table 7 - 49 DOD Space Authorization for Outdoor/Indoor Swimming Pools

Military Population <sup>3</sup>	Number of Pools Authorized <sup>1,2</sup>	
	25 Meter (5,177 sq. ft.)	50 Meter (8,910 sq. ft.)
1 - 250 <sup>4</sup>	-	None
251 - 1,500	1	-
1,501 - 3,000	-	1
3,001 - 5,000	1	1
5,001 - 10,000 <sup>5</sup>	1	2

<sup>1</sup>One installation pool may be enclosed to allow for year round utilization. The building will not exceed 10,000 square feet for a 63' x 82' - 2" pool, and will not exceed 16,000 square feet for a 54' x 165' pool, exclusive of authorized bathhouse space.

<sup>2</sup>One bathhouse of 3,700 square feet gross area may be provided with each pool.

<sup>3</sup>Military population includes all active duty personnel, 70% of their dependents and 10% of the retired military personnel served.

<sup>4</sup>One pool, not to exceed 800 square feet, may be provided as required.

<sup>5</sup>One 54' x 165' pool with 6,000 square foot bathhouse may be authorized for each increment of 4,000 military strength over 10,000.

Table 7 - 50 Space Allocation for Swimming Pool

Sub-Space	Size (Gross SF) based on Military Population	
	7,000-10,000	10,000-15,000
Pool and Deck	10,120	16,820
Spectator Seating	1,210	1,210
Storage	230	230
Total	11,560	18,260

### (4) Handball/Racquetball Courts

(a) *Description.* Provide indoor handball and racquetball courts designed for both singles and doubles. Provisions should be made for spectator viewing.

(b) *Space Allocation.* See Table 7 - 51 and 7 - 52

(c) *Relationships.* All courts for handball, racquetball and squash should be clustered together and located with convenient access to and from locker rooms. A waiting area for the players should be located so that the court entrances are clearly visible. This area should be part of the access corridor. Spectator viewing spaces should be accessible from general building circulation.

Table 7 - 51 DOD Space Authorization for Indoor Handball/Racquetball and/or Squash courts:<sup>1</sup>

Military Strength	Total Number of Courts <sup>2</sup>
101 - 500	1
501 - 1,000	2
1,001 - 2,000	4
2,001 - 3,500	6
3,501 - 5,500	8
5,501 - 7,500	10
7,501 - 10,000 <sup>3</sup>	12

<sup>1</sup>These courts are additive to those in gymnasiums and physical fitness/athletic complexes.

<sup>2</sup>Courts should not exceed 1,200 gross square feet per court, and when applicable have common walls.

<sup>3</sup>For each increment of military strength of 3,000 above 10,000, an additional two courts may be provided.

Table 7 - 52 Space Allocation for Handball/Racquetball Courts

Sub-Space	Size (Gross SF) based on Military Population	
	7,000-10,000	10,000-15,000
courts	1,600	3,680
Spectator Area	230	230
Total	1,830	3,910

Table 7 - 53 Space Allocation for Exercise Rooms

Sub-Space	Size (Gross SF) based on Military Population	
	7,000-10,000	10,000-15,000
Gymnastics	2,760	4,600
Body Building	1,150	2,300
Apparatus Storage	660	660
Total	4,570	7,560

**(5) Exercise Rooms**

(a) *Description.* Exercise rooms consist of two main spaces. One area is primarily for gymnastics, that is occasionally used for individual exercise, combative sports and dance instruction. The other area is used primarily for body building, individual weight training, exercise and combative sports. This area may also be used for conferences and classes. A separate space is required for storage of gymnastic and exercise apparatus.

(b) *Space Allocation.* See Table 7 - 53.

(c) *Relationships.* The exercise rooms should be located adjacent to, or near, the gymnasium.

**b. Staff Spaces****(1) Director's Office**

(a) *Description.* Provide an office for the director who operates the physical fitness center. The director holds frequent conferences with staff and visitors.

(b) *Space Allocation.* See Table 7 - 46.

(c) *Relationships.* The director's office should be adjacent to the program director's office, and have priority views of, and access to, the activity areas.

**(2) Program Directors' and Clerks' Office**

(a) *Description.* This program should provide space for activity program directors who oversee various segments of the physical fitness program and clerical personnel. It will generally be a visitor's first stop upon entering the building.

(b) *Space Allocation.* See Table 7 - 54.

(c) *Relationships.* This office should be adjacent to the director's office, and the lobby, and should have views and access to the activity areas.

**(3) Pool Office**

(a) *Description.* The pool office will be occupied at all times when the pool is in operation. It will be staffed by personnel performing supervisory and administrative functions, including control of activities and life-guarding.

(b) *Space Allocation.* See Table 7 - 55.

(c) *Relationships.* The pool office should be located at the diving end of the pool, and should have a full-width window for complete view of the pool from the office. Also, the office should provide access to the pool for swimmers, and to the corridor for non-swimmers.

Table 7 - 54 Space Allocation for Program Directors' and Clerks' Office

Sub-Space	Size (Gross SF) based on Military Population	
	7,000-10,000	10,000-15,000
Sports Officer	155	155
Program Director	155	155
Clerical Area	90	90
Total	400	400

Table 7 - 55 Space Allocation for Pool Office

Sub-Space	Size (Gross SF) based on Military Population	
	7,000-10,000	10,000-15,000
Pool Manager	115	115
Lifeguards	85	85
Total	200	200

## c. Support Spaces

### (1) Trainer/First Aid Room

(a) *Description.* This room is used mainly for athletic training (to protect against injuries), first aid, and care of athletic injuries. It will also be used for first aid training.

(b) *Space Allocation.* See Table 7 - 46.

(c) *Relationships.* The trainer/first aid room should be near the locker rooms and equipment issue room. Adequate doors and corridors should be provided for access to ambulance services. Access from exterior and interior athletic facilities should be as direct as possible, and free from wheelchair or stretcher barriers.

### (2) Locker Rooms

(a) *Description.* Locker rooms will be changing, dressing, and storage areas for participants in athletic and recreational activities.

(b) *Space Allocation.* See Table 7 - 46.

(c) *Relationships.* The locker rooms should be adjacent to the equipment issue room and trainer/first aid room. Provide direct access from the locker room to the sauna, toilet, and drying/shower area, gymnasium and swimming pool.

### (3) Shower Rooms

(a) *Description.* Showers are used before entering the pool area and for washing after swimming or other athletics. A group shower and separate drying room should be provided for men. Individual shower and drying spaces should be provided for women.

(b) *Space Allocation.* See Table 7 - 46.

(c) *Relationships.* The showers should be adjacent to the locker room with access from the locker room to the pool, through the shower. Access from the men's locker room to the showers should be through the drying room.

### (4) Participant Toilets

(a) *Description.* Provide toilets for users of the locker rooms, pool, gymnasium and other facilities.

(b) *Space Allocation.* See Table 7 - 46.

(c) *Relationships.* The Toilets should be adjacent to the pool, gymnasium, and exercise rooms.

### (5) Sauna Room

(a) *Description.* Saunas are used most often after athletic and recreational activities.

(b) *Space Allocation.* See Table 7 - 46.

(c) *Relationships.* Each sauna room should have direct access from the locker room.

### (6) Laundry

(a) *Description.* In the laundry area, apparel and towels are washed, dried, and stored until transferred to the equipment issue area from where they will be distributed to the users of the facility.

(b) *Space Allocation.* See Table 7 - 46.

(c) *Relationships.* The laundry should be adjacent to, and accessible from, the equipment issue room.

### (7) Equipment Issue

(a) *Description.* This room is used to issue non-bulky recreational and athletic equipment, towels, team uniforms and equipment. A separate storage space is required to store uniforms and seasonal indoor/outdoor recreational equipment that may require security.

(b) *Space Allocation.* See Table 7 - 46.

(c) *Relationships.* This space should be accessible from the locker rooms and activity areas. It should be adjacent to the laundry room. Storage for outdoor equipment may be contiguous or separate.

### (8) Lobby

(a) *Description.* All participants, visitors, and spectators enter and leave the center through the lobby. All reception functions should be performed here, or in immediately adjacent spaces. Visitors should gain a sense of the range of activities of the center from views and information available in the lobby.

(b) *Space Allocation.* See Table 7 - 46.

(c) *Relationships.* Activity areas should be visible from the lobby and its extensions (spectator galleries and corridors). Spectator seating, lockers and playing areas should be accessible. The lobby should provide direct access to staff spaces, public toilets, and vending.

### (9) Concession/Vending

(a) *Description.* This area contains vending machines for use by staff, participants and spectators. During special events, concession counters will be set up in this area for processing a greater number of people.

(b) *Space Allocation.* See Table 7 - 46.

(c) *Relationships.* This area should be adjacent to the lobby and, if possible, located with convenient access to an outdoor sundeck.

### (10) Public Toilets

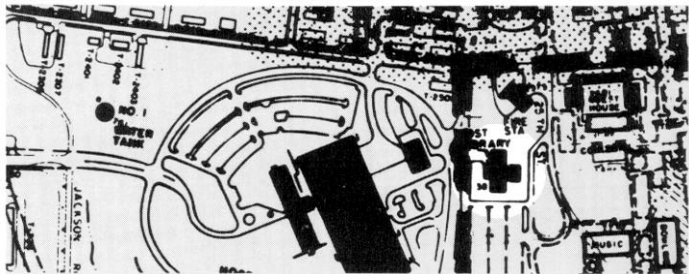
(a) *Description.* These toilets are used primarily by visitors, spectators and staff.

(b) *Space Allocation.* See Table 7 - 46.

(c) *Relationships.* Locate adjacent to the lobby area with easy access to and from the spectator viewing area. No spectator should travel more than 150' to a toilet.

7 – 17

Libraries: Main, Branch and Service Centers  
DG 1110-3-110



The primary objectives of the Army library program are to promote the intelligent use of information media and to support education and training programs.

The Main Library provides the service of both a public and an academic library. It should facilitate users who are browsing as well as those who need specific reference and reserve material. The main library serves the entire military community including active and retired military personnel and their dependents. Civilian employees may also have borrowing privileges. The main library houses the administrative offices and technical services that operate the main collection, branch libraries, field libraries and bookmobiles. Space should be provided for club and committee meetings, discussion groups and small conferences.

When justified by the requirements of a particular installation, branch libraries (not exceeding 4,000 square feet) are sometimes provided to support an education center. The area authorized for multiple increments can be consolidated in a single branch if the population density can accommodate it.

Space allowances for main Libraries may be increased by 10% where the facility is designated as a command reference center. If one or more bookmobiles are operated from the main library, a minimum of 300 square feet per bookmobile will be required in addition for sorting the bookmobile collections, book trucks, and work space for the bookmobile staff.

Library Service Centers. When justified by the requirements of a particular area or command, a library service center may be authorized. This is a specialized activity, and functions vary from one center to another. Basically, a library service center is a place where library materials are received, catalogued, processed, recorded, distributed, and redistributed to library outlets and also held in reserve for use as needed. Building size is to be determined by the maximum quantity of library materials to be on hand at any one time; i.e., the total number of books or other items held in reserve plus the number of items on hand to be processed for distribution.

Table 7 - 56 DOD Space Authorization for Main Libraries

Military Strength <sup>1</sup>	Area (Gross SF) <sup>2</sup>
0 - 500	2,500 <sup>3</sup>
1,501 - 2,500	6,250
4,001 - 6,000	10,500
8,001 - 12,000	18,000
12,001 - 16,000	20,000
16,001 - 20,000	24,000
20,001 - 26,000	30,000
32,001 - 40,000	44,000
50,001 - 60,000	64,000

<sup>1</sup> Military strength includes active duty plus 40% of their dependents.

<sup>2</sup> Environmental adjustment factors for libraries. For general planning purposes the maximum authorized space allowances must be adjusted to reflect the availability of on-installation housing. See DOD 4270.1-M.

<sup>3</sup> Accommodate in other facilities.

Table 7 - 57 DOD Space Authorization for Library Service Centers

Library Materials to be Housed (Vols.)	Area (Gross SF)
1 - 40,000	6,000
40,001 - 60,000	10,000
60,001 - 80,000	13,000
80,001 - 100,000	16,000
100,001 - 120,000	19,000
120,001 - 140,000	22,000
140,001 - 160,000	24,000
160,001 - 180,000	26,000
180,001 - 200,000	28,000



## a. General Use Spaces

### (1) Entrance and Lobby

(a) *Description.* The lobby serves as a waiting area for patrons. Display cabinets, public pay telephones, and a drinking fountain are appropriate. The lobby is also suitable for an after-hours book drop.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* The main entrance should be convenient to the parking area, since most patrons will drive to the library. If there are two entrances, one should be from the parking lot and the other from the street and sidewalk. The lobby should usually be linked to the control area and adjacent to the multi-purpose room and toilets.

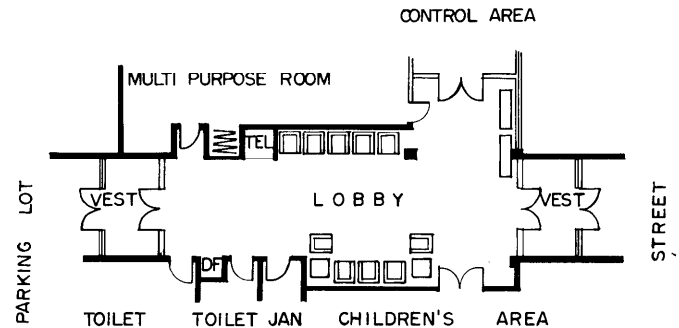
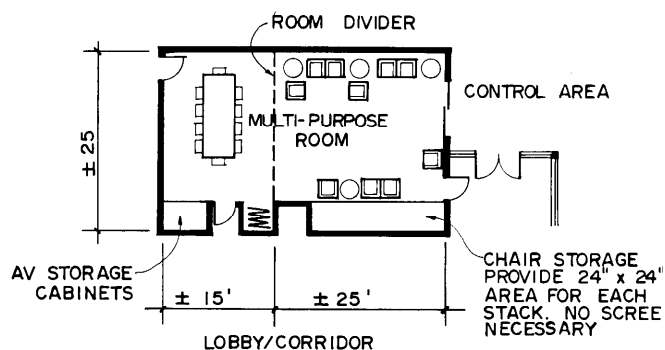


Table 7 - 58 Recommended Space Allocation for Main Libraries

Sub-Space	Size (Gross SF) based on Military Strength					
	1,501- 2,500	4,001- 6,000	8,001- 12,000	12,001- 16,000	16,001- 20,000	20,001- 26,000
General Use Spaces	420	565	2,080	2,150	2,215	2,365
Entrance and Lobby	185	185	340	410	475	575
Multi-Purpose Room	-	-	1,150	1,150	1,150	1,150
Public Toilets	235	380	590	590	590	640
Public Service Spaces	5,240	8,820	13,840	15,745	18,735	23,595
Public Card Catalog	60	115	235	295	755	390
Control Area	630	630	630	630	630	630
Reference Area	440	1,010	1,625	1,950	2,210	2,775
Periodicals Area	600	815	1,305	1,435	1,590	2,070
Children's Area	360	1,480	2,275	2,740	3,875	4,540
Stack Area	1,600	2,400	4,125	4,640	5,195	7,170
Reading and Study Area	1,420	2,290	3,520	3,890	4,370	5,810
Typing and Listening Booths	80	80	125	165	210	210
Staff Spaces	514	765	1,675	2,225	3,835	4,455
Administrative Librarian	-	-	-	170	170	170
Post Librarian	110	110	110	110	110	110
Extension Collection Area	-	-	-	-	415	415
Technical Services	275	510	750	1,060	1,610	2,090
Shipping and Receiving	-	-	230	230	270	270
Staff Lounge	-	-	360	430	500	570
Staff Washroom and Lockers	15	30	110	110	125	195
Janitor's Closet	115	115	115	115	115	115
Bookmobile Garage	-	-	-	-	520	520
Total Main Post or Branch Library	6,175	10,150	17,595	20,120	24,780	30,415



## (2) Multi-Purpose Room

(a) *Description.* The multi-purpose room serves as a music-listening lounge and an extension of the general reading area. It also serves as a conference and meeting room for classes, seminars, movies, and special interest groups during and after regular library hours. Storage is required for folding or stacking chairs and for audio-visual equipment.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* The multi-purpose room should open onto the lobby. Access to the multi-purpose from the reading areas will expand the seating capacity of the library when the multi-purpose room is not being used for group activities. The staff kitchen should be nearby to facilitate food service. Storage for chairs and audio-visual equipment should be shared with the children's area, if possible.

## (3) Public Toilets

(a) *Description.* Public toilets are required during regular library hours, and after-hours when the multi-purpose room may be open.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* The public toilets should be adjacent to the lobby and the multi-purpose room. The entrance to these facilities should be visible from the control desk.

## b. Public Service Spaces

### (1) Public Card Catalog

(a) *Description.* The public card catalog is maintained by technical services personnel.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* The public card catalog must be adjacent to, and visible from, the control area and reference area. It should be easily accessible from technical services, the general reading area, book stacks, periodical area, and post librarian's office. It should be centrally located and conveniently accessible from all other public service spaces.

### (2) Control Area

(a) *Description.* All patrons using or borrowing library materials must pass through this area. Technicians at the control desk check materials in and out and answer questions. A work area behind the desk is used for maintenance of files. The work area must include storage space for reserve materials and for equipment that is to be checked out.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* Technicians at the Control desk should be able to see as much of the public service area as possible. The work area should be adjacent to technical services. The control area must be adjacent to the entrance and lobby, to prevent unauthorized removal of library materials.

Table 7 - 59 Space Allocation for Reference Area

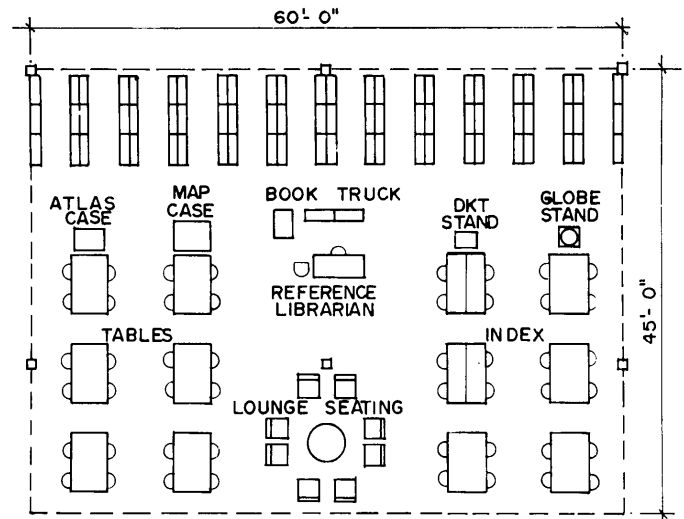
Sub-Space	Size (Gross SF) based on Military Strength					
	1,501- 2,000	4,001- 6,000	8,001- 12,000	12,001- 16,000	16,001- 20,000	20,001- 26,000
Shelving	140	335	550	640	735	780
Reference Librarian	-	-	-	-	170	170
Reference Cases	130	130	130	130	130	130
Tables	170	345	750	750	860	1,290
Lounge	-	85	85	140	140	170
Other	-	115	110	290	175	235
<b>Total</b>	<b>440</b>	<b>1,010</b>	<b>1,625</b>	<b>1,950</b>	<b>2,210</b>	<b>2,775</b>

### (3) Reference Area

(a) *Description.* The reference area includes user seating and storage space for reference material. Reference materials are non-circulating and primarily used in the immediate area. The reference librarian, located in the reference area, answers research and reference questions and assists patrons in finding and using library materials throughout the public service area.

(b) *Space Allocation.* See Table 7 - 59.

(c) *Relationships.* The reference area should be near the control area so that control desk personnel can occasionally assist patrons. The card catalog area should be adjacent and visible from the reference librarian's desk. Periodicals, microfiche and the non-fiction section of the book stacks should be nearby.



### (4) Periodicals Area

(a) *Description.* The periodicals area is used by browsers and by patrons who regularly read periodicals. It should be an attractive, comfortable, lounge-like space.

(b) *Space Allocation.* See Table 7 - 60.

(c) *Relationships.* The periodicals area should be near the reference area and easily accessible to the reference librarian. It should be visible and directly accessible from the lobby and other activity spaces, and may even function jointly as a reading lounge with the social/recreation program.

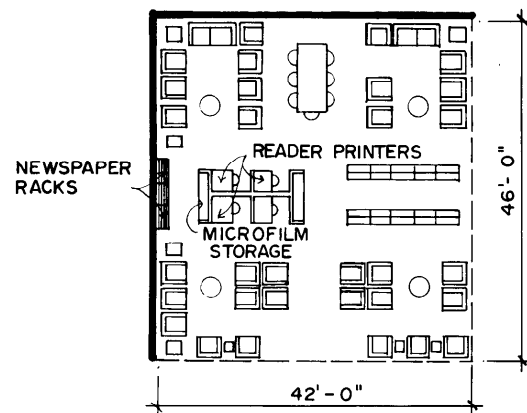
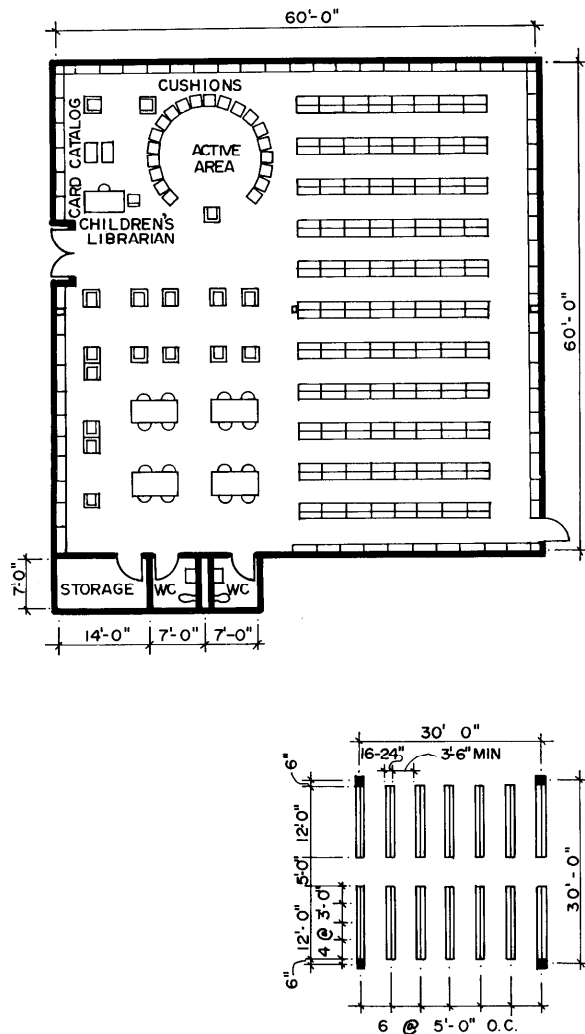


Table 7 - 60 Space Allocation for Periodicals Area

Sub-Space	Size (Gross SF) based on Military Strength					
	1,501- 2,000	4,001- 6,000	8,001- 12,000	12,001- 16,000	16,001- 20,000	20,001- 26,000
Seating Area	370	575	875	945	1,050	1,380
AV Carrel	-	-	45	90	140	185
Reference	110	120	145	160	160	160
Shelving	120	120	240	240	240	345
Total	600	815	1,305	1,435	1,590	2,070



### (5) Children's Area

(a) *Description.* The children's collection contains separate stacks, tables, lounge seating, and a card catalog. Libraries with a large children's collection may contain a semi-independent children's area with its own control area, toilets, and children's librarian, who assists, supervises, and conducts special activities, such as story hour, slides, and movies.

(b) *Space Allocation.* See Table 7 - 61.

(c) *Relationships.* The children's area should be visible from the main control desk, if there is no assigned children's librarian. A storage area for AV equipment and chairs should be nearby. Acoustic separation from other library areas is recommended.

### (6) Stack Area

(a) *Description.* The stack area houses fiction and non-fiction books, boxed periodicals, and bound newspapers, in double-faced shelving. Stack areas are open to patrons.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* The public card catalog and reference area should be adjacent. Technical services should be nearby. Stack areas should be close to reading and study areas. Generally the fiction stacks should be near lounge furniture and the non-fiction stacks near tables and carrels.

Table 7 - 61 Space Allocation for Children's Area

Sub-Space	Size (Gross SF) based on Military Strength					
	1,501- 2,000	4,001- 6,000	8,001- 12,000	12,001- 16,000	16,001 - 20,000	20,001- 26,000
Shelving and Card Catalogue	170	1,170	1,860	2,325	2,725	3,110
Children's Librarian	-	-	-	-	145	145
Seating	185	275	370	630	810	1,080
Children's Toilet	-	-	-	-	115	115
Storage	6	35	45	60	80	90
<b>Total</b>	<b>361</b>	<b>1,480</b>	<b>2,275</b>	<b>3,015</b>	<b>3,875</b>	<b>4,540</b>

**(7) Reading and Study Areas**

(a) *Description.* Provide seating near fiction shelves and a reading area near the entrance with new acquisitions, topical subjects, and paperbacks displayed nearby. Small seating groups for two to eight readers should be located in the book stack and reference areas. Students may require study rooms for group work and spaces for individual study.

(b) *Space Allocation.* See Table 7 - 62.

(c) *Relationships.* Reading and study areas should be dispersed among the book stacks. These areas can help to define stacks devoted to specific aspects of the collection. Some study areas should be remote from major circulation paths.

**(8) Typing and Listening Booths**

(a) *Description.* Library patrons may require booths in order to use tape recorders, stereo equipment, or typewriters. Equipment is either permanently furnished in booths or borrowed from the control desk.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* Typing and listening booths should be near the control area to facilitate checkout and supervision of equipment and materials.

**c. Staff Spaces****(1) Administrative Librarian's Office**

(a) *Description.* The administrative librarian is responsible for the operation of the entire post library system, which includes the main post library, branch libraries, the bookmobile, and all field library units. The administrative librarian's office must accommodate frequent meetings with library personnel and visitors.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* Since the administrative librarian frequently requires typing services, a clerk typist should be adjacent. Access to technical services is required to facilitate general supervision. If possible, visitors should have direct access to this office without passing through staff, reading, or stack areas.

**(2) Post (Supervisory) Librarian**

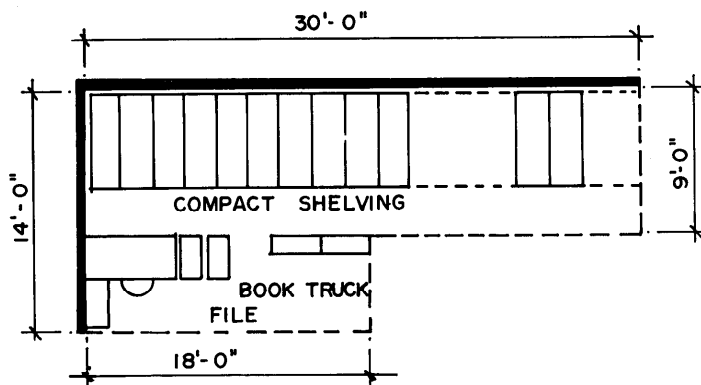
(a) *Description.* The post librarian (responsible for the operation of the main post library) directs the operations of the control desk, the reference and children's area, and frequently aids patrons in finding books and materials.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* This office should be adjacent and visually linked to the control desk.

Table 7 - 62 Space Allocation for Reading and Study Areas

Sub-Space	Size (Gross SF) based on Military Strength					
	1,501- 2,000	4,001- 6,000	8,001- 12,000	12,001- 16,000	16,001- 20,000	20,001- 26,000
Lounge Seating	620	760	1,445	1,520	1,725	2,410
Tables	430	630	1,035	1,265	1,435	2,010
Carrels	420	900	1,040	1,105	1,210	1,380
Total	1,470	2,290	3,520	3,890	4,370	5,800



### (3) Extension Collection Area

(a) *Description.* The extension collection is used primarily for the bookmobile service. The librarian in charge of this collection also supervises the branch libraries. Books from the branches may occasionally be stored as part of the extension collection. Storage space may also be required for paperback kits stockpiled for issue.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* This area should be adjacent to the technical services area and near the bookmobile garage.

### (4) Technical Services Area

(a) *Description.* Technical services serve the entire post library system, including the main post library, branch libraries, and the extension collection. Library materials are received, classified, catalogued, processed, recorded and distributed as needed. The work stations required include a card catalog (to house master shelflist, authority files, on-order cards, etc), index tables for bibliographic materials, a work corner for drafting tables, map case, sink, and trucks for books in process.

(b) *Space Allocation.* See Table 7 - 63.

(c) *Relationships.* The office of the administrative librarian should have direct access to the technical services area. Required adjacencies to this area include shipping and receiving, extension collection, bookmobile garage and control area. Proximity to the staff lounge and public card catalog is desirable.

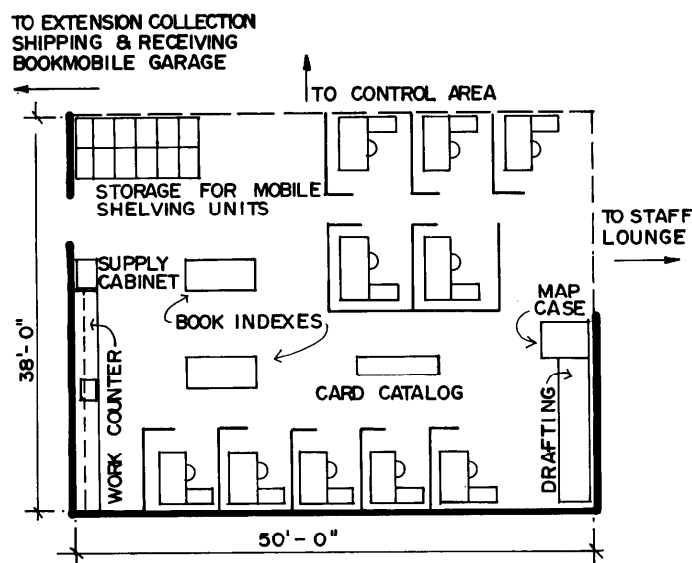


Table 7 - 63 Space Allocation for Technical Services Area

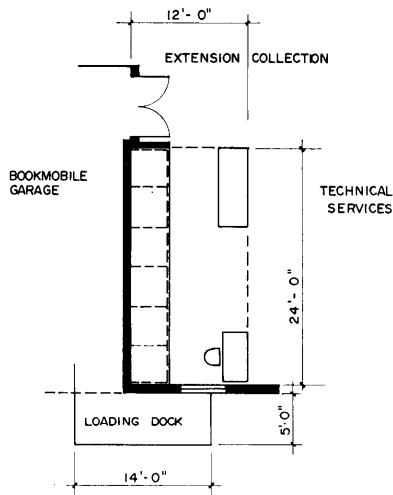
Sub-Space	Size (Gross SF) based on Military Strength					
	1,501- 2,000	4,001 - 6,000	8,001- 12,000	12,001- 16,000	16,001- 20,000	20,001- 26,000
Work Station, Reference and Supplies	165	325	510	800	1,105	1,535
Drafting Tables	-	-	-	-	145	145
Work Counter with Sink	35	35	35	40	60	70
Shelving	55	125	125	140	165	210
Other	20	25	80	80	135	130
<b>Total</b>	<b>275</b>	<b>510</b>	<b>750</b>	<b>1,060</b>	<b>1,610</b>	<b>2,090</b>

### (5) Shipping and Receiving

(a) *Description.* After library materials are delivered at the loading dock, they are taken to the shipping and receiving area where they are unpacked and sorted. Books processed in technical services are also sent through shipping and receiving when transferred to another branch or area of the library.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* Locate this area adjacent to the bookmobile garage, extension collection and technical services.



### (6) Staff Lounge

(a) *Description.* The staff lounge is used for refreshments and relaxation and for informal staff meetings. It should include kitchen facilities.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* Locate this area adjacent to technical services so that the staff can enter directly. If possible, the lounge should be near the multi-purpose room in order to share kitchen facilities.

### (7) Staff Washrooms and Lockers

(a) *Description.* A single washroom to accommodate individual use by all staff members is sufficient for most libraries. Provide lockers for staff without private offices.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* Locate rest rooms and lockers near technical services since it has the greatest concentration of staff. Entrances should be remote from public toilet entrances. For economy, consider proximity to other areas that require plumbing, such as the technical services sink, staff lounge, janitor's closet, or the public toilets.

### (8) Janitor's Closet

(a) *Description.* The janitor's closet is used by maintenance personnel for storage of cleaning gear and as a work area.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* This area should be centrally located in order to minimize walking distances. For economy of plumbing, the janitor's closet should be located near the public and staff toilets.

### (9) Bookmobile Garage

(a) *Description.* The bookmobile garage serves as vehicle storage and includes a loading dock. It can also serve as access between the shipping and receiving area and the outside loading dock.

(b) *Space Allocation.* See Table 7 - 58.

(c) *Relationships.* The bookmobile garage should be adjacent to the shipping and receiving area and technical services area.

7 - 1 8

Military Recreation  
Supply/Support Facility

Space allowances for special services office and supply facilities are shown in Table 7 - 64. This central supply and administrative operation should be conveniently located for vehicular delivery from off-post, and to other functions around the post. Individual personnel accessibility is not a primary factor in its siting and design.

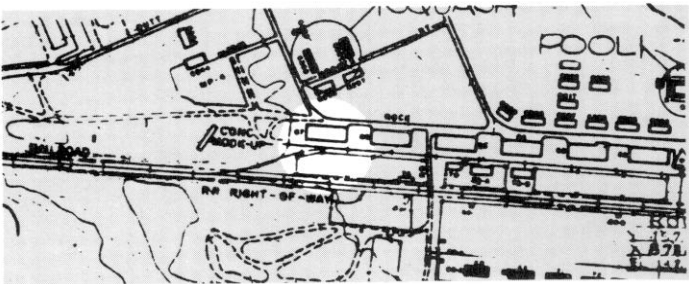


Table 7 - 64 DOD Space Authorization for Military Recreation Supply/Support Facility

Military Population <sup>1</sup>	Area (Gross SF)	
	Supply Facilities	Office <sup>2</sup>
1 - 1,000	3,500	
1,001 - 2,000	5,000	
2,001 - 4,000	7,500	
4,001 - 8,000	10,000	
8,001 - 12,000	12,500	
12,001 - 20,000	16,000	
20,001 - 50,000	20,500	
50,001 - 100,000	30,000	

<sup>1</sup> Military population consists of active military strength plus 25% of the dependent population.

<sup>2</sup> In addition to gross square footage allowed for supply facilities, not less than 80, nor more than 90 square feet of net space per office employee may be provided.

7 - 1 9

Multipurpose  
Recreation Buildings

A multi-purpose recreation building provides space for religious, welfare, and recreational activities at small installations (with military strengths of less than 500) where separate religious, welfare and recreational buildings are not authorized. The building may include space for religious activities, recreation, enlisted personnel club, NCO open mess, officers' open mess, entertainment activities, youth center, child care center, and theater. The size of the building will be determined from Table 7 - 65. Space allotment for the various activities within the building may be determined locally.

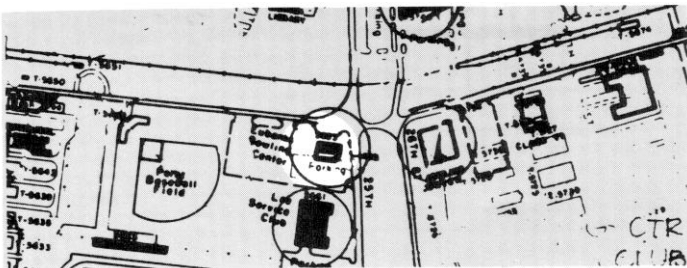
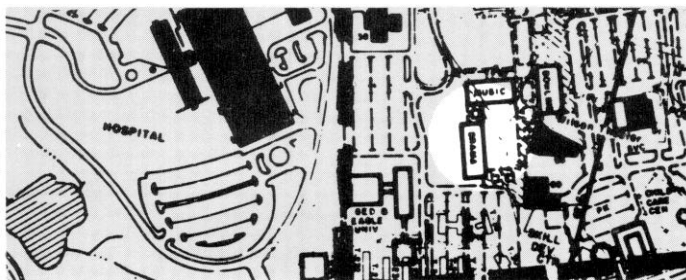


Table 7 - 65 DOD Space Authorization for Multipurpose Recreation Buildings

Military Population	Area (Gross SF)
50 - 100	7,000
101 - 200	8,000
201 - 300	9,000
301 - 400	10,500
401 - 500	12,500

<sup>1</sup> Military Population includes active duty military plus 50% of the dependent personnel.





7 - 20

## Music and Drama Centers

DG 1110-3-120

Table 7 - 66 DOD Space Authorization for Drama Centers and Music Centers

Military Strength <sup>1</sup>	Area (Gross SF)	
	Drama Centers	Music Centers
up to 500	Combine with Recreation Center	
500 - 5,000	Provided by unit entertainment centers.	
5,001 - 15,000	14,000	14,000
over 15,000	20,000	20,000

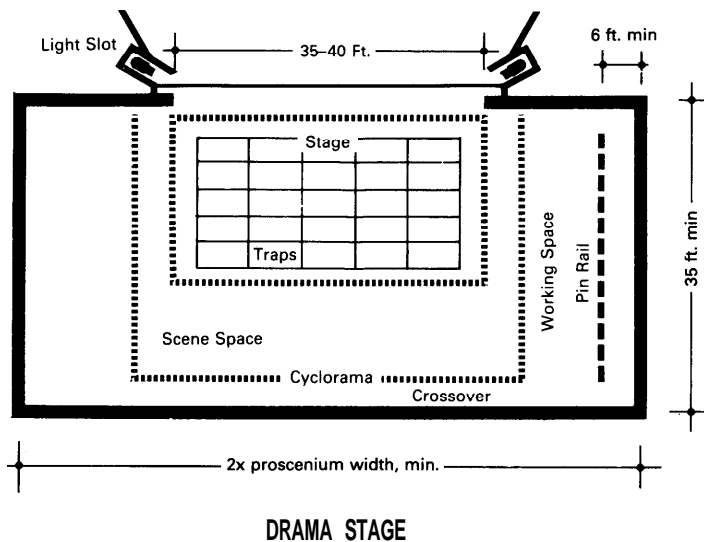
<sup>1</sup>Military strength includes active duty military plus 25% of their dependents.

There are four categories which comprise the Army Performing Arts program:

- Music, including all forms of locally produced vocal and instrumental music, music listening/appreciation, and music-related technical activities.
- Theater, including all forms of locally produced drama and musical performances, theater auditing/appreciation, and theater technical activities.
- Unit Level Entertainment, which consists of an organized set of music and theater activities programmed to fit the personnel in a specific unit. The activities generally emphasize music, but may include a comprehensive mixture of music, theater and dance, as appropriate.
- Commercial Entertainment & Incoming Touring Show, which presents professional or amateur performances, produced by another military installation, commercial operation, or civilian community or school.

The *DOD Construction Criteria Manual* specifies that only one drama center and one music center shall be constructed at each installation, and only when there is no existing facility that can be suitably adapted. When a particular program requires both a new drama and music center; the DOD Criteria specifies one consolidated center. Space authorization figures are found in Table 7-66.

The main functional areas of music and drama centers consist of the room (stage and audience seating), back-stage (performer/product production facilities), and the front end (lobby and audience facilities). Space allocation for these areas, and their sub-spaces, are summarized in Table 7 - 67.



### a. The Room

(1) *Description.* The heart of any performance facility is the Room, the place of performance. The Room includes the seating and stage or platform. The important choices related to Room design include:

- use of the Room for music, drama or both (shape)
- relationship of audience and performers in frontal, thrust or surround form (arrangement) and,
- estimated seating capacity.

(2) *Space Allocation.* The allocation for the seating, stage, platforms, orchestra pit and related areas, varies according to the type of performance. For the gross square footage of the room, with stage or platform, see Table 7 - 68.

(3) *Relationships.* All activities and spaces within the center relate, either directly or indirectly to the Room. Public spaces are directly related to the Room in terms of audience capacity and access. Backstage facilities are directly related in terms of scene handling, stage form, and stage access requirements, and indirectly by rehearsals and set assembly which take place in the Room.

Table 7 - 67 Space Allocation for Music and Drama Centers

Size (Gross SF) based on Military Population

5,001-15,000

over 15,000

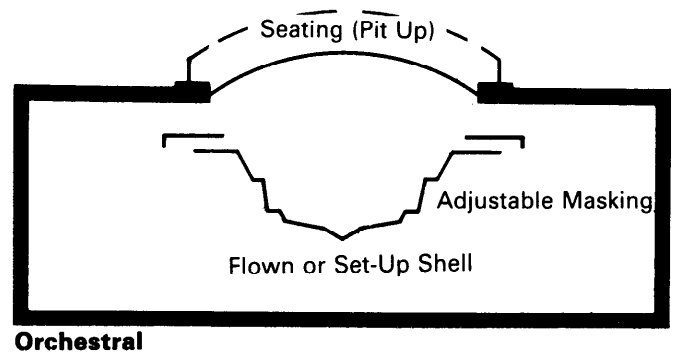
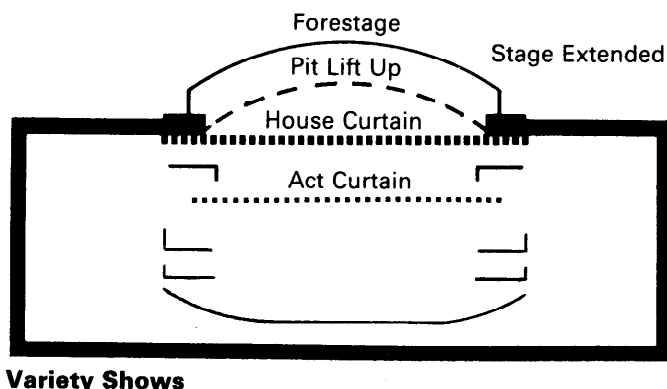
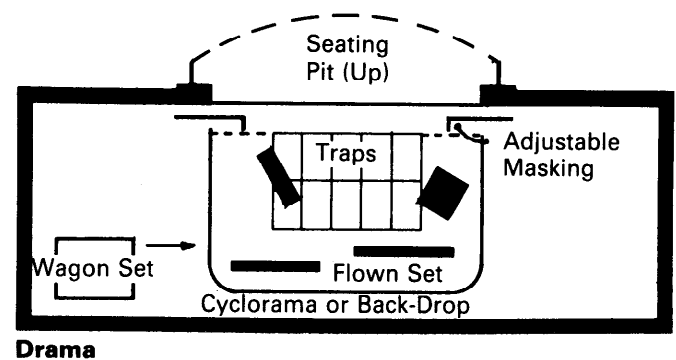
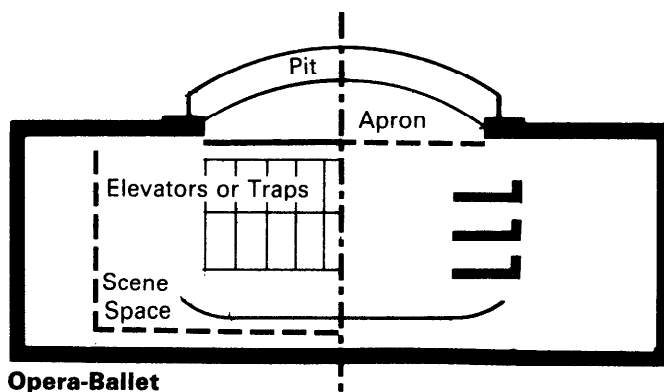
	Basic Drama	Small Drama	Basic Music	Small Music	Dual Use Alternative #1 <sup>2</sup>	Large Drama	Large Music	Dual Use Alternative #2 <sup>2</sup>
The Room	7,200	7,200	9,000	9,000	2 rooms = 11,850	11,350	16,500	2 rooms = 22,500
Backstage	7,430	11,070	6,495	10,090	11,270	17,275	14,975	31,160
Performer's Area	1,895	3,195	2,135	2,915	3,220	4,585	4,475	3,490
Technical Facilities	180	240	120	240	900	420	300	900
Preparatory <sup>1</sup> Areas	5,355	7,635	1,985	6,935	7,150	12,270	10,200	26,770
The Front End	4,200	4,200	8,490	8,490	8,490	7,140	14,920	14,920
Public Spaces	3,550	3,550	7,390	7,390	7,390	6,040	12,990	12,990
Staff Areas	650	650	1,100	1,100	1,100	1,100	1,930	1,930
Total	18,830	22,470	23,985	27,580	31,610	35,765	46,395	68,580

<sup>1</sup> These figures are derived from an itemized table (Table 7 - 69) in this volume and sometimes contradict the summarized totals listed in the Design Guide itself.

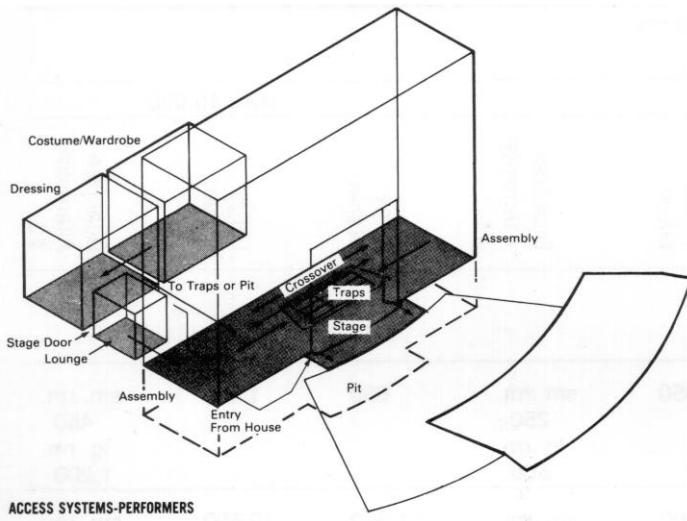
<sup>2</sup> Alternative #1 consists of a 200-250 Chamber Recital Hall and a 500 Frontal/Thrust Theater. Alternative #2 consists of a 1200 seat Opera/Concert Hall and a 450 Experimental Theater.

Table 7 - 68 Space Allocation for Room with Stage or Platform

	Size (Gross SF) based on Military Population							
	5,001-15,000				over 15,000			
Room(s) with Stage House or Platform	Basic Drama	Small Drama	Basic Music	Small Music	Dual Use Alternative #1	Large Drama	Large Music	Dual Use Alternative #2
No. seats	300	300	650	650	sm. rm. 250 lg. rm. 500	650	1,400	sm. rm. 450 lg. rm. 1,200
Size	7,200	7,200	9,000	9,000	sm. rm. 3,850 lg. rm. 8,000	11,350	16,500	sm. rm. 6,500 lg. rm. 16,000



### THE MULTI-USE STAGE



## b. Backstage

### (1) Performers' Area

(a) *Description.* This area accommodates cast activity during scheduled performances (including dress rehearsals). Dressing, toilets, artists' lounge, green room, stage door, and pre-entry assembly areas are commonly provided for all performing arts disciplines. Showers are especially important for drama and dance. Drama facilities must also include makeup areas, often separate from dressing rooms with suitable mirrors, lighting, countertop and washbasins. A costume wardrobe is recommended. Musicians need areas for warm-up and tuning prior to performance. If none can be provided, a more generous sound proofed dressing room is essential.

(b) *Space Allocation.* See Table 7 - 69.

(c) *Relationships.* Spaces in the performers' area are closely related to the stage. The stage door provides controlled entry to backstage, away from the public entry, often with a security post off stage. The Green Room (sometimes used to meet guests and the press) should be accessible from the house or public lobby. The costume wardrobe should be directly accessible from dressing.

Table 7 - 69 Space Allocation for Performers' Area

	Size (Gross SF) based on Military Population							
	5,001-15,000				over 15,000			
	Basic Drama	Small Drama	Basic Music	Small Music	Dual Use Alternative #1	Large Drama	Large Music	Dual Use Alternative #2
Dressing Group	720	1,385	720	1,200	1,080	2,305	2,160	See Total
Private/ Conductor	-	-	215	215	480	-	215	
Wardrobe	95	190	-	-	100	215	-	
Makeup	240	360	-	-	240	360	-	
Toilets and Showers	480	480	480	480	480	660	680	
Lounge/"Green Room"	360	600	480	600	600	960	1,440	
Kitchen	-	60	-	60	-	60	60	
Warm Up	-	-	240	240	240	-	-	
Assembly								
"Onstage"	(192) <sup>1</sup>	(192)	-	-	-	(192)	(160)	
"Offstage"	-	-	(600)	(600)	-	-	-	
"Stage Door"								
Waiting	-	120	-	120	-	120	120	
Total	1,895	3,195	2,135	2,915	3,220	4,680	4,475	3,490

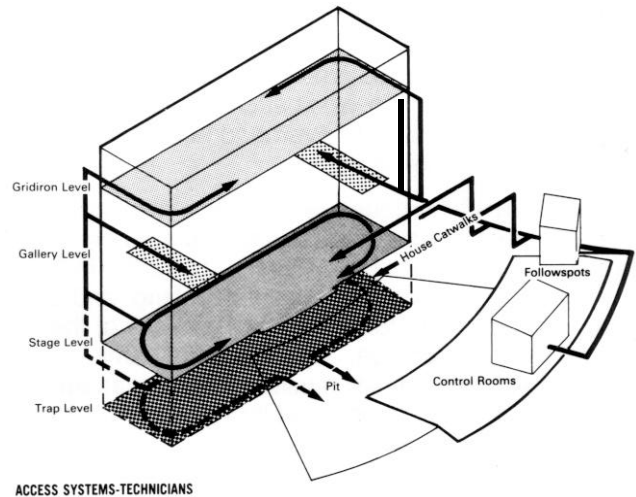
<sup>1</sup>Figures in parentheses are accounted for in Room tabulations.

## (2) Technical Facilities

(a) *Description.* These areas accommodate accessories for scheduled performances. Basic technical facilities for both music and drama include lighting and sound control, manned equipment positions and accessways, and the stage manager's command post. A substantial stage crew, especially for drama, may require a waiting lounge and locker area of its own.

(b) *Space Allocation.* See Table 7 - 70.

(c) *Relationships.* The relationship of major technical areas to the house and stage include visibility of the stage from the control center and spot booth, and electrical interconnection of all direct technical support spaces. Accessibility to backstage areas should also be reasonably convenient.



## (3) Preparatory Areas

(a) *Description.* These areas are for production and maintenance activities prior to performances, which in most cases continue year-round and day-to-day.

Every performing arts facility requires a loading door and receiving area with associated trunk storage for road boxes and general storage for bulk material. A maintenance shop with tool storage should also be provided. Drama facilities require a scene shop rather than (or in addition to) a maintenance shop. A separate shop is

Table 7 - 70 Space Allocation for Technical Facilities

	Size (Gross SF) based on Military Strength							
	5,001-15,000					over 15,000		
	Basic Drama	Small Drama	Basic Music	Small Music	Dual Use Alternative #1	Large Drama	Large Music	Dual Use Alternative #2
Lighting Control	(120) <sup>1</sup>	-	( 90)	( 90)	240	(175)	( 90)	See Total
Sound Control	( 70)	(310)	( 90)	( 90)	240	(100)	( 90)	
Projection Control	-	-	-	(120)	-	-	(250)	
Record/ Playback	-	( 70)	-	-	-	( 70)	-	
Video Broadcast	-	-	-	-	-	(120)	( 90)	
Technical Onstage	(145)	(145)	( 95)	( 95)	-	(145)	( 95)	
Follow Spots	( 95)	(145)	( 95)	(145)	180	(145)	(145)	
Stage Crew Lounge	180	240	120	240	240	420	300	
Total	180	240	120	240	900	420	300	900

<sup>1</sup>Figures in parentheses are accounted for in Room tabulations.

needed for costume fabrication and maintenance. Space for the storage and repair of lighting instruments and electric gear should also be provided in a separate, secure room furnished with workbench, cable reels, shelving and wall mounted or overhead hooks and clamping bars for fixture storage.

Music facilities usually require fewer scene production facilities and more practice facilities than drama centers. These consist of several small practice rooms for individuals, at least one for piano and voice coaching, and a sectional warm-up room for rehearsing portions of the resident orchestra or chorus. A Music and Drama Center designed primarily for music will have instrumental storage and a repair shop in addition to general storage and maintenance, plus chair, stands, riser and lighting storage, and probably a score library.

(b) *Space Allocation.* See Table 7 - 71.

(c) *Relationships.* The scene shop should adjoin the stage view quarters and office, and be directly accessible from the stage house. Practice rooms should be accessible from dressing areas, and stage, during performance hours. The possible shared use of arts and crafts workshop space for scenery shop purposes should be considered.

## c. The Front End

### (1) Public Spaces

(a) *Description.* The organization of public spaces is established by entry, sequence and control. Two distinct zones are created by means of ticket-taking, a public zone and a patron or audience zone:

- Activities of the public zone are arrival, vehicular drop-off, waiting for friends or for the doors to open, lining up for tickets or admission, purchase of advance tickets, obtaining season schedule or coming events information.
- The patron zone includes all spaces communicating with the House after surrendering one's ticket. It is important that all essential services, such as restrooms and checkrooms, be accessible without recrossing the control point. The patron zone includes a foyer where the audience may gather before the performance or during intermissions.

(b) *Space Allocation.* See Table 7 - 72.

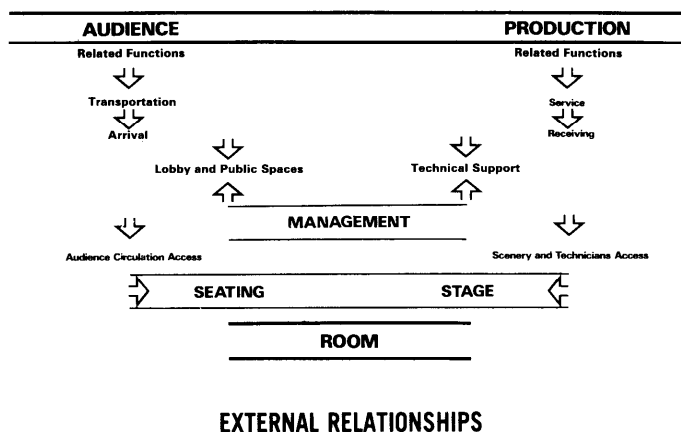
(c) *Relationships.* The entrance and lobby areas should provide direct and visible access from the outside or from shared circulation spaces of a Community Activity Center. The visibility will help expose and advertise the functions of the music or drama program. The patron zone should conveniently interconnect all audience support spaces with all seating areas. Visibility from public to patron zones may be provided while maintaining access control. Access to the outdoors from the patron zone, for use during intermissions, may be desirable.

Table 7 – 72 Space Allocation for Public Spaces

Sub-Space	Size (Gross SF) based on Military Population							
	5,001-1,500				Over 1,500			
	Basic Drama	Small Drama	Basic Music	Small Music	Dual Use Alternative #1	Large Drama	Large Music	Dual Use Alternative #2
Lobby	240	240	420	420	420	420	720	720
Main Foyer	2,160	2,160	3,600	3,600	3,600	3,120	6,000	6,000
Sub Foyers	-	-	1,200	1,200	1,200	720	2,160	2,160
Food/Beverage	35	35	70	70	70	70	150	150
Storage	85	85	90	90	90	90	180	180
Toilets and J.C.	310	310	420	420	420	420	780	780
Coat Room/Circulation	720	720	1,595	1,595	1,595	1,200	3,000	3,000
Total	3,550	3,550	7,395	7,395	7,395	6,040	12,990	12,990

Table 7 - 71 Space Allocation for Preparatory Areas

	Size (Gross SF) based on Military Strength							
	5,001-15,000				over 15,000			
	Basic Drama	Small Drama	Basic Music	Small Music	Dual Use Alternative #1	Large Drama	Large Music	Dual Use Alternative #2
<b>Loading/ Receiving</b>	360	480	360	840	See Total	480	700	See Total
<b>Storage</b>								
General	1,200	1,800	240	240		1,800	600	
Stage & Chairs	-	-	90	90		-	90	
Trunks	-	-	-	180		-	540	
Risers	-	-	-	900		-	900	
Pianos	-	-	-	600		-	600	
Lighting/ Instruments	180	300	480	480		300	840	
Scores/Scripts	-	-	95	95		120	270	
Costumes	600	1,200	-	-		1,200	-	
Property	-	240	-	-		240	-	
<b>Shops/Assembly</b>								
Tools/Shop	1,800	2,400	-	600		1,400	600	
Maintenance	-	-	360	360		-	360	
Scene Paint Shop	-	-	-	-		2,940	-	
Costume Workroom	360	360	-	-		360	-	
Electrical	145	145	240	240		260	240	
<b>Technical Crew</b>								
Director's Office	-	-	120	240		-	240	
Design Area	530	530	-	-		530	-	
Road Manager	-	-	-	-		-	-	
Toilets	-	-	-	-		-	-	
<b>Performance Rooms</b>								
Rehearsal	-	-	-	960		2,160	960	
Practice	-	-	-	930		-	1,080	
Warm-up	-	-	-	-		-	2,000	
Laundry & Dye Works	180	180	-	-		260	-	
Recording/ Control	-	-	-	180		-	180	
Editing	-	-	-	-		220	-	
<b>Total</b>	<b>5,355</b>	<b>7,635</b>	<b>1,985</b>	<b>6,935</b>	<b>7,150</b>	<b>12,270</b>	<b>10,200</b>	<b>26,772</b>



## (2) Staff Areas

(a) *Description.* Staff space allocations depend more on staff size than house capacities. Commercial and civic performance facilities often devote 15% of the front end area to offices alone. Military facilities tend to have a much smaller permanent staff that seems to function "family style". Two directors' offices are suggested for prolonged use. The house manager requires an office adjoining ticket sales. General office space for one full-time clerical person, plus an area for storage and duplicating, is needed.

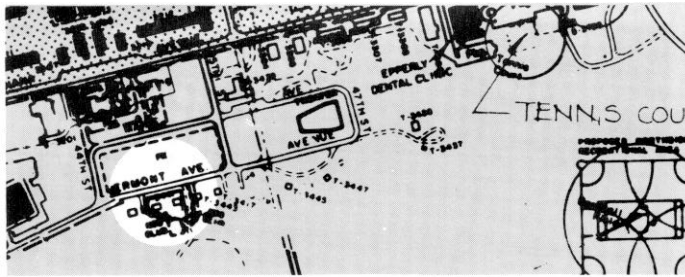
Ushers may share the first aid area. However, a separate lounge is recommended for large groups. At least one custodian's mop closet is required at each floor, plus storage for foyer and lobby fittings (chairs, etc.). A space must be provided for snack and beverage service equipment, with more area if secondary banquet uses are contemplated.

(b) *Space Allocation.* See Table 7 - 73.

Table 7 – 73 Space Allocation for Staff Areas

Sub-Space	Size (Gross SF) based on Military Population							
	5,001-1,500				Over 15,000			
	Basic Drama	Small Drama	Basic Music	Small Music	Dual Use Alternative #1	Large Drama	Large Music	Dual Use Alternative #2
Director's Office	180	180	360	360	360	360	360	360
Publicity Office	-	-	-	-	-	-	140	140
House Manager	-	-	120	120	120	120	220	220
Box Office	70	70	70	70	70	70	160	160
General Office	340	340	220	220	220	220	220	220
Workroom	-	-	-	-	-	-	180	180
Storage/Duplication	60	60	95	95	95	95	95	95
Library	-	-	95	95	95	95	150	150
Ushers	-	-	140	140	140	140	180	180
First-Aid Room	-	-	-	-	-	-	230	230
<b>Total</b>	<b>650</b>	<b>650</b>	<b>1,100</b>	<b>1,100</b>	<b>1,100</b>	<b>1,100</b>	<b>1,935</b>	<b>1,935</b>





## 7-21

# Open Messes (Clubs)

Table 7 - 74 DOD Space Authorization for Enlisted Personnel Open Messes

El through E3 Population <sup>1</sup>	Area (Gross SF)
1 - 500	30 sq. ft./person <sup>2</sup>
1,001 - 3,000	19,000
5,001 - 7,000	40,000
10,001 - 15,000	60,000
20,001 - 25,000	80,000
30,001 - 40,000	110,000
50,001 - 60,000	150,000

<sup>1</sup>Military population includes active duty enlisted, grades E1 through E3, and 50% of their spouses.

<sup>2</sup>Provide in other facilities.

Table 7 - 75 DOD Space Authorization for Non-Commissioned Officers' Open Messes

Military Population <sup>1</sup>	Area (Gross SF)
1 - 50	44 sq. ft. per member <sup>2</sup>
251 - 400	8,000
1,251 - 2,000	22,000
4,001 - 5,000	42,000
8,001 - 10,000	68,000
14,001 - 16,000	98,800
20,001 - 22,000	120,800
28,001 - 30,000	149,400

<sup>1</sup>Military population is defined as active duty NCO's in the top six grades plus 50% of their spouses and 50% of the retired population supported by the installation.

<sup>2</sup>Provide in other facilities.

Table 7 - 76 DOD Space Authorization for Officers' Open Messes

Military Population <sup>1</sup>	Area (Gross SF)
1 - 50	44 sq. ft. per person <sup>2</sup>
251 - 400	12,000
1,001 - 2,000	27,800
3,001 - 4,000	42,500
5,001 - 6,000	53,900
7,001 - 8,000	64,000
9,001 - 10,000	72,700

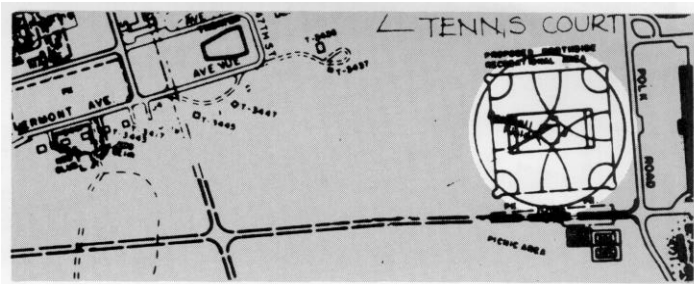
<sup>1</sup>Military population includes active duty officers, plus 50% of their spouses and 50% of the retired officers supported by the installation.

<sup>2</sup>Provide in other facilities.

DOD construction criteria specify open mess space requirements for enlisted personnel, non-commissioned officers', and officers. An enlisted personnel's open mess operating a branch or annex to accommodate non-commissioned officers may use the combined space authorizations for non-commissioned officers and enlisted men. The same applies to an NCO open mess operating a branch to accommodate enlisted personnel.

Tables 7 - 74, 7 - 75 and 7 - 76 summarize the space authorizations for each type.

While the club system is operated under its own auspices, it's function relates closely to the purposes of Morale Support Activities. In certain posts, particularly small ones, these functions may be able to share some facilities or be consolidated in the same structure for better coordination of activities. Even where separate facilities are authorized and appropriate, their planning should take into account the potential programmatic and special-facility-use relationships between the functions. The clubs may also be appropriately consolidated or co-located with certain retail and service activities, such as PX service outlets, liquor stores, and snack bars.



## 7 - 22

# Outdoor Playing Courts and Fields

TM 5-803-10

These facilities provide for the outdoor sports and games most commonly played for competition and for recreation by military and civilian personnel. Numbers of facilities authorized are summarized in Table 7 - 77. They should be designed to accept national standards for the sport, and level of play or competition involved, as indicated in Table 7 - 78.

The location of these outdoor playing courts and fields adjacent to Community Activity Centers, or Physical Fitness Centers, is recommended for convenience and use of support spaces (lockers, equipment storage, and showers) as well as complementary activities (snack bar, lounge, and youth activity center). While the large space requirements of these outdoor facilities may preclude complete integration in CAC site planning, the adjacency of at least some courts and fields will be of mutual attraction and exposure benefit.

Table 7 - 78 Space Allocation for Outdoor Playing Courts and Fields

	Size (Gross SF) <sup>1</sup>
Tennis Court	1,300
Track	187,310
Regulation Baseball Field	130,680-167,710
Junior Baseball Field	52,270
Regulation Softball Field	62,500-90,000
Volleyball Court	4,000
Handball Court (four-wall)	800
Badminton	1,620

<sup>1</sup>Size of one facility of each type is given. For number of facilities to be provided per military population, see Table 7 - 77.

Table 7 - 77 DOD Authorization for Outdoor Playing Courts and Fields

Facility	Number per Military Population <sup>1,2</sup>
tennis court	1 for up to 500 population, 1 add'l for each add'l 500, up to 10 courts, 1 add'l for each 1000 above 5000.
440-yard running track	1 for installations of 1000 and over.
regulation baseball field	1 for installations of 1000 and over.
regulation softball field	2 for up to 750, 2 for each add'l increment of 1000.
volleyball courts	3 for up to 750, 3 for each add'l increment of 1000.
basketball court	1 each for up to 750, 1 each for each add'l increment of 1000.
handball court	
badminton court	

<sup>1</sup>Military population is defined as active duty plus 35 percent of their dependents and 10 percent of retired military personnel supported.

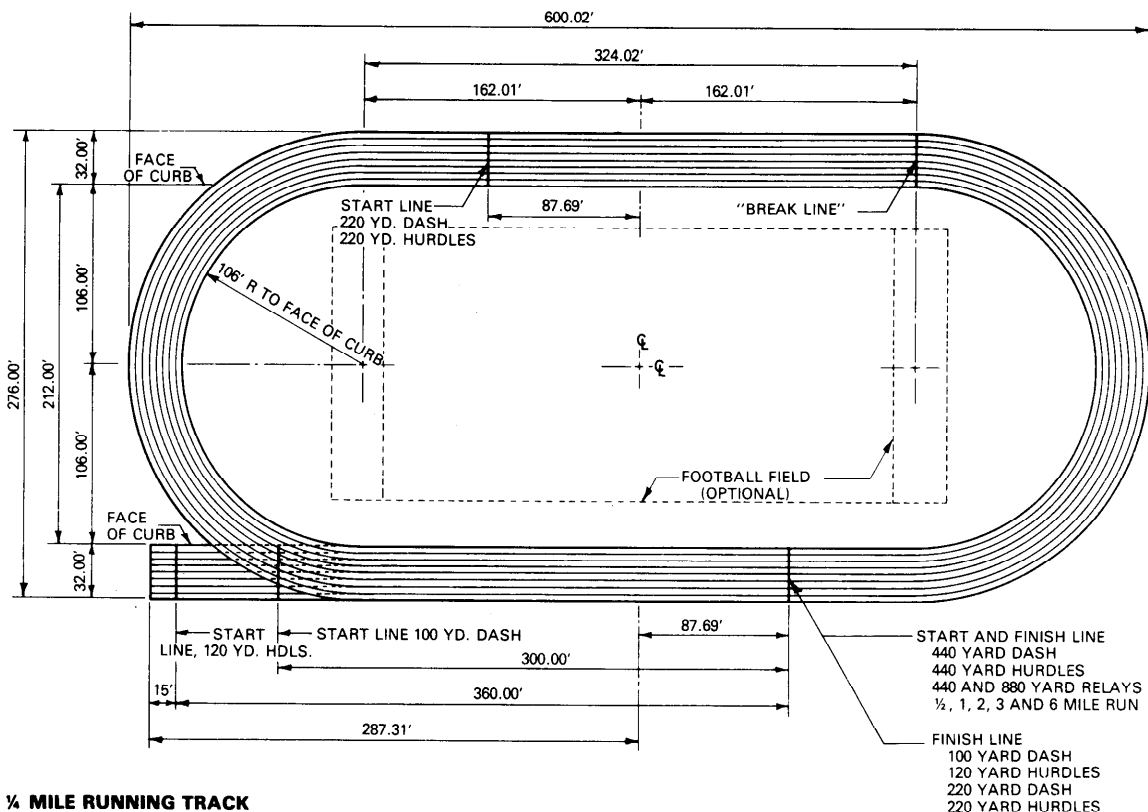
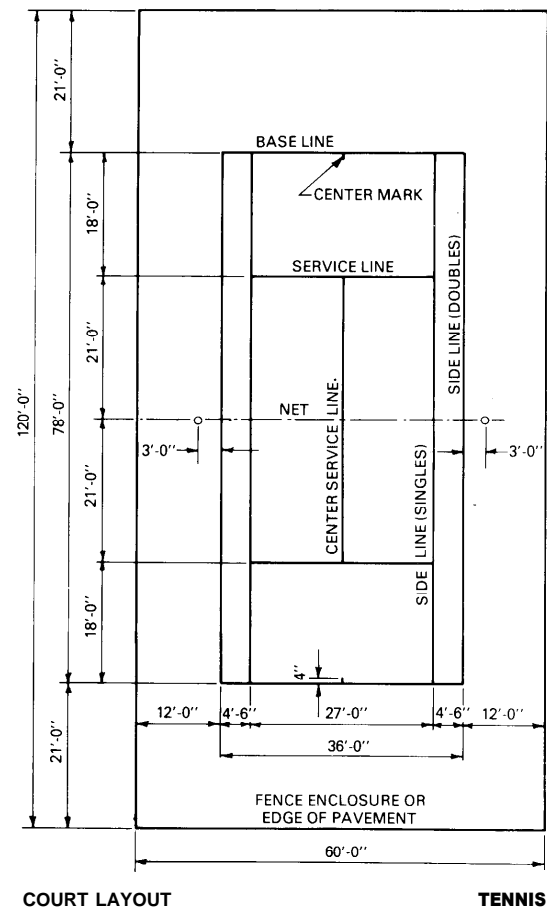
<sup>2</sup>For a dependent population, ages 6 - 19, of up to 500, and for each increment of 500 thereafter up to 2,500, one youth baseball field may be provided. An additional youth baseball field may be provided for each additional increment of 750 dependent population ages 6 - 19.

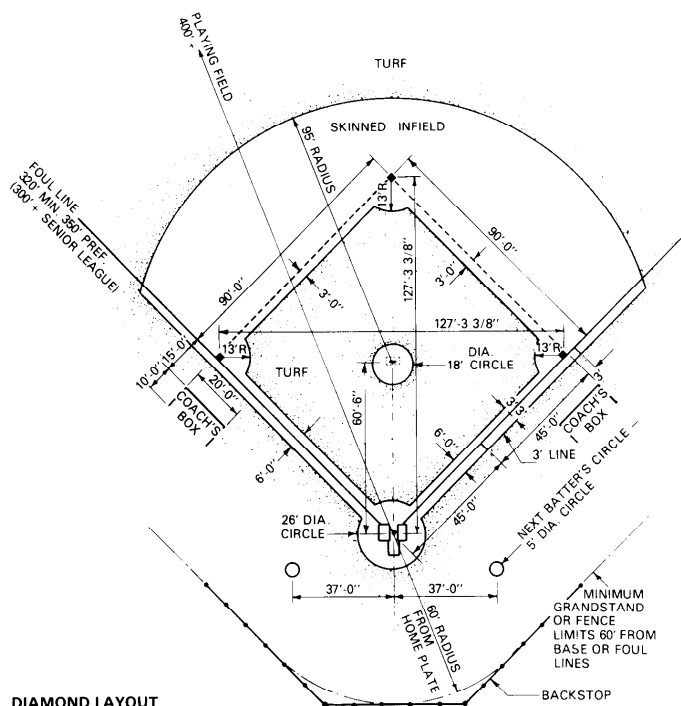
## a. Tennis Court

- (1) *Description.* The playing court is 36'x78', plus at least 12' clearance on both sides or between courts in battery, with 21' clearance on each end.
- (2) *Space Allocation.* See Table 7 - 77 and 7 - 78.
- (3) *Relationships.* Preferred orientation is for the long axis to be north-south. Fencing (10' high chain link fence) is recommended on all sides of the court.

## b. Track

- (1) *Description.* Inside radius to face of curb is 106' - 0". Track width is 32' - 0" for eight 4 - foot-wide lanes. Overall width is 276' - 0". Overall length is 600.02'.
- (2) *Space Allocation.* See Table 7 - 77 and 7 - 78.
- (3) *Relationships.* The track should be oriented so that the long axis falls in a sector from north-south to north-west-southeast with the finish line at the northerly end. Drainage must be provided for the track surface and optional football field, but will be dependent upon site grading.





DIAMOND LAYOUT

BASEBALL

### c. Regulation Baseball Field

(1) *Description.* Baselines are 90' - 0". Pitching distance is 60' - 6". Distance down foul lines is 320' minimum, 350' preferred. Outfield distance to center field is 400' +. For senior league baseball, recommended distance from home plate to outfield fence at all points is 300' +.

(2) *Space Allocation.* See Table 7 - 77 and 7 - 78.

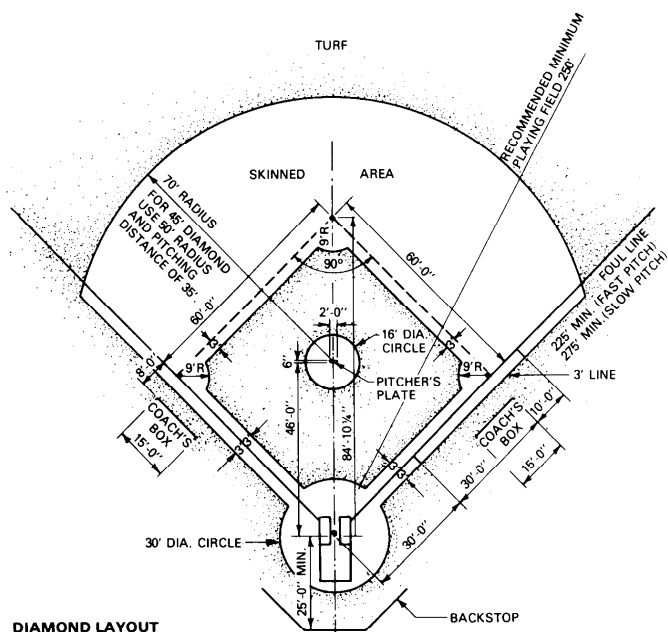
(3) *Relationships.* Optimum orientation is to locate home plate so that the pitcher is throwing across the sun, and the batter is not facing it. The line from home plate through the pitcher's mound and second base should run east-northeast.

### d. Little League Baseball Field

(1) *Description.* Baselines are 60' - 0". Pitching distance is 46' - 0". Pitcher's plate is 6" above the level of home plate. Distance down foul line is 200'. Outfield distance to pocket in center field is 200' to 250'.

(2) *Space Allocation.* See Table 7 - 77 and 7 - 78.

(3) *Relationships.* Optimum orientation is to locate home plate so that the pitcher is throwing across the sun, and the batter is not facing it. The line from home plate through the pitcher's mound and second base should run east-northeast.



DIAMOND LAYOUT

SOFTBALL 12"

### e. Regulation Softball Field

(1) *Description.* Baselines are 60' - 0" for men and women, 45' - 0" for juniors. Pitching distances are 46' - 0" for men, 40' - 0" for women, 35' - 0" for juniors. Fast pitch playing field is 225' radius from home plate between foul lines for men and women. Slow pitch is 275' radius for men, 250' radius for women.

(2) *Space Allocation.* See Table 7 - 77 and 7 - 78.

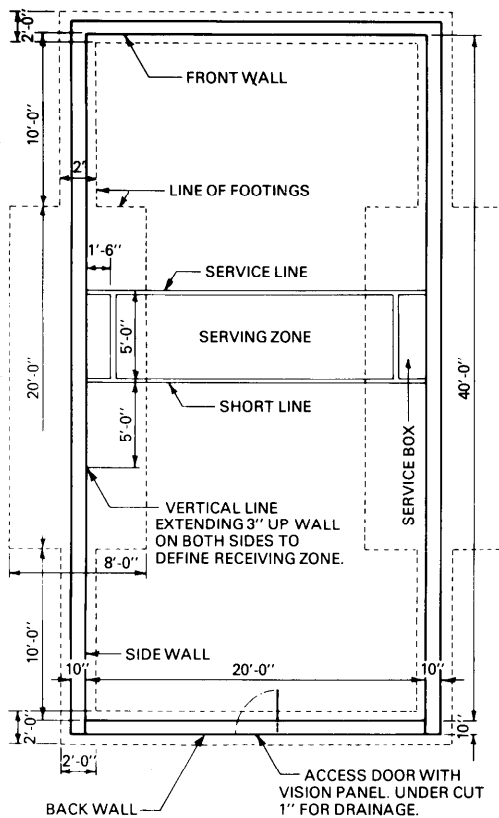
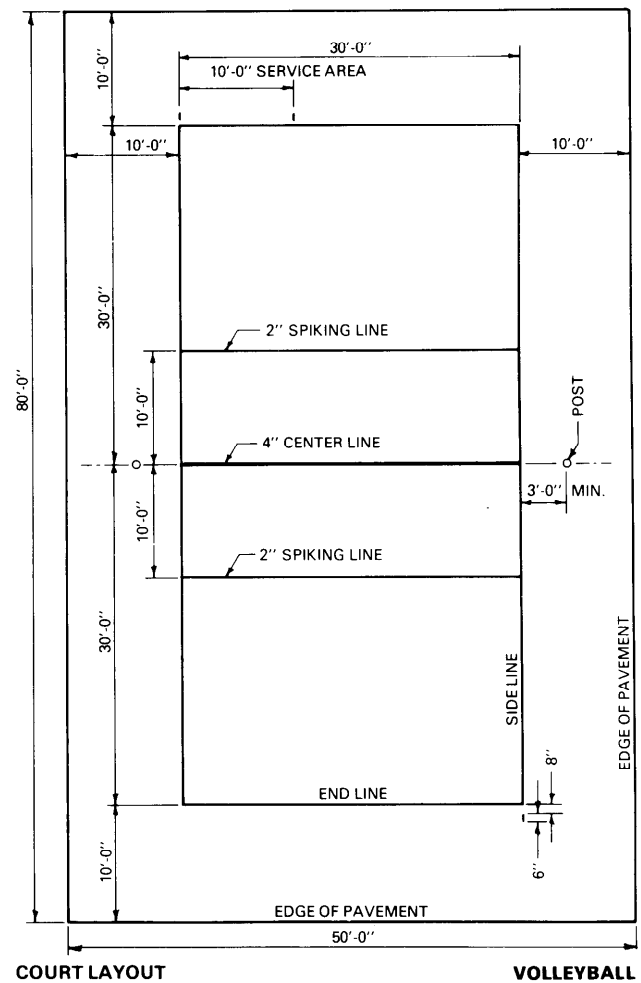
(3) *Relationships.* Optimum orientation is to locate home plate so that the pitcher is throwing across the sun, and the batter is not facing it.

## f. Volleyball Court

- (1) *Description.* Playing court is 30' x 60' plus 6' minimum, 10' preferred, unobstructed space on all sides.
- (2) *Space Allocation.* See Table 7 - 77 and 7 - 78.
- (3) *Relationships.* Preferred orientation is for the long axis to be north-south.

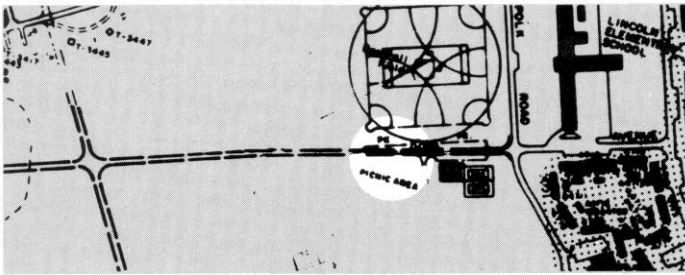
## g. Handball Court, Three and Four Wall

- (1) *Description.* Playing court is 20' - 0" wide by 40' - 0" long plus a minimum 10' - 0" to the rear of the three wall court. Overhead clearance required is 20' - 0" minimum.
- (2) *Space Allocation.* See Table 7 - 77 and 7 - 78.
- (3) *Relationships.* Preferred orientation is for the long axis to be north-south with the front wall at the north end. Special provisions for drainage must be made and access must be provided through the back wall for four wall courts.



COURT LAYOUT - 4-WALL





## 7 - 23

# Outdoor Recreation Facilities

TM 5-803-12

Table 7 - 79 Recommended Space Allocation for Outdoor Recreation Facilities

Facility	Minimum Size (Gross SF) per Facility
Family Travel Camp	799
Beach Bathhouse	2,081-2,469
Gun Skeet and Trap Facility	2,706-3,262
Marina Support Building	2,310-2,518
Cabin	874
Cottage	890
Dormitory	2,694
Outdoor Recreation Pavillion	3,139-3,335
Riding Stables:	
1. Operations Building	3,518
2. Rental Boarding Stables	11,718

The outdoor recreation program serves installation personnel, their families, retirees, civilian employees and, if possible, the general public. The program varies according to the location and requirements of the installation. Where applicable, it includes:

- a family travel camp used by installation personnel as well as visiting army personnel and dependents,
- a beach bathhouse including a lifeguard/first aid room, snackbar and restrooms,
- a gun, skeet and trap ranges,
- a marina support building including a lounge, storage and sales area,
- outdoor recreation lodging consisting of cabins, cottages and dormitories,
- an outdoor recreation pavillion used for picnics, group outings and parties, and,
- a riding stable for recreation service horse rental and privately boarded horses.

For authorized numbers and spaces of these facilities, see DOD 4270.1-M, *Construction Criteria Manual*. Recommended space allocations are summarized in Table 7 - 79. For detailed description and recommended allocations see TM 5-803-12.

7 - 24

Package Liquor Stores

This facility provides for retail sales to authorized customers and the transfer (wholesale) of alcoholic beverages to clubs and open messes. Space allowances for these facilities are shown in Table 7 - 80.

Package liquor stores are an active retail attractor, and should be located to capitalize on this. Like other retail functions, they should be located together with other community activities and services in the Main Post Center, wherever possible.

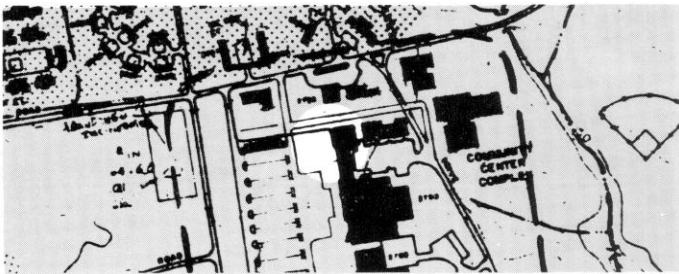
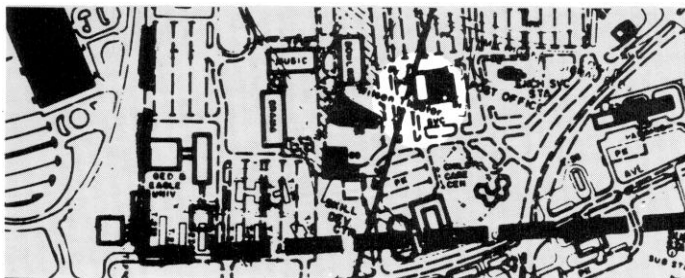


Table 7 - 80 DOD Space Authorization for Package Liquor Stores			
CONUS/Annual Case Sales <sup>1,2</sup>	Overseas/Authorized Customers	Area (Gross SF)	
2,000	500	900	
5,000	1,000	1,950	
10,000	1,500	2,950	
15,000	2,000	3,900	
20,000	3,000	5,900	
30,000	4,000	7,800	
40,000	6,000	10,000	

<sup>1</sup>Includes Alaska and Hawaii.  
<sup>2</sup>Annual total case sales both retail and transferred to clubs and open messes.





## 7 - 25

# Post Offices

Table 7 - 81 DOD Space Authorization for Central Post Offices

Installation <sup>1</sup> Population	Central Post Office Area (Gross SF) <sup>2</sup>
1 - 500	400
1,001 - 2,500	1,750
4,501 - 7,500	4,500
11,501 - 16,500	8,250
22,501 - 28,500	12,525
34,501 - 40,500	17,325
46,501 - 52,500	22,125

<sup>1</sup> Installation population consists of assigned military personnel and their dependents, plus civilian personnel who work on the installation.

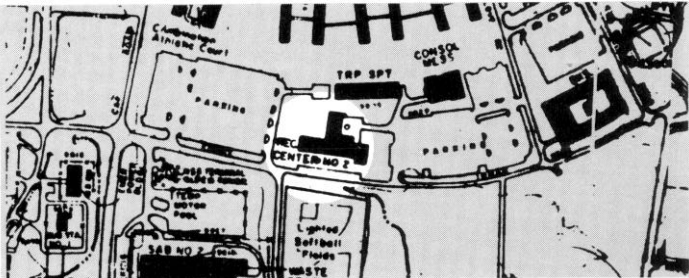
<sup>2</sup> Exclusive of space required for loading platforms.

(a) *Central Post Offices.* Space allowances for central post offices are shown in Table 7 - 81. These figures represent the basic central post office square footage and are provided for general guidance. Additional space may be provided if a central post office serves specialized functions located on the military installation, such as post directory, nonresident schools, major and subordinate headquarters, service schools, hospitals, carrier delivery to family housing units, or self-service postal units installed within the lobby of the facility.

Determination of specific total requirements and space provisions for specialized functions (as listed above) shall be coordinated with the U.S. Postal Services Regional Postmaster General. This should be accomplished during the initial planning stage to arrive at a mutually agreeable gross area.

Siting of central post offices should provide convenient relationship to post-wide retail and community service facilities at the Main Post Center. Clustered or consolidated accommodation with such functions as bank, commissary, PX and specialized retail outlets is recommended.

(b) *Branch Post Offices.* Branch post offices, not exceeding 1,500 gross square feet each, may be provided as required at larger installations.



7 - 26

Recreation Centers  
DG 1110-3-132

The primary objective of the recreation center program is to solidify a sense of community by encouraging social exchange, an appreciation of other cultures, and the development of new skills. The recreation center serves all members of the military community including married personnel and their dependents, DA employees, retired personnel and single enlisted personnel. The diversity of program objectives, and users, requires a great deal of spatial flexibility. Spaces should be designed for combined use and adaptability. Recreation centers and other community leisure facilities (such as post exchange, theater, and GED Center) can be mutually supportive in attracting clients. Located together in a Main Post Center, they can serve as a focal point for the post. In planning and designing Main Post and Local Community Activity Centers, the recreation center functions are key. They are the social “glue” which holds together the diverse individual functions. As such, they should relate to all the different activity-spaces of the CAC, and the components of the recreation center program should be split apart and dispersed throughout the community facility, in appropriate relationships.

There are four major aspects of the recreation center program, regular, leisure services and resources, special interest, and mobile recreation units. Also, periodically using the facilities are non-recreational events such as military organization observances, conferences, bloodmobiles, commander’s calls, etc. Main recreation centers provide for all major components, while branch centers provide only for regular and special interest areas.

The major functional areas of recreation centers include:

- Large Group Activities
- Small Group Activities
- Administration
- Refreshment
- Transitional and Service Areas
- Outdoor Activities

Table 7 - 82 DOD Space Authorization for Recreation Centers

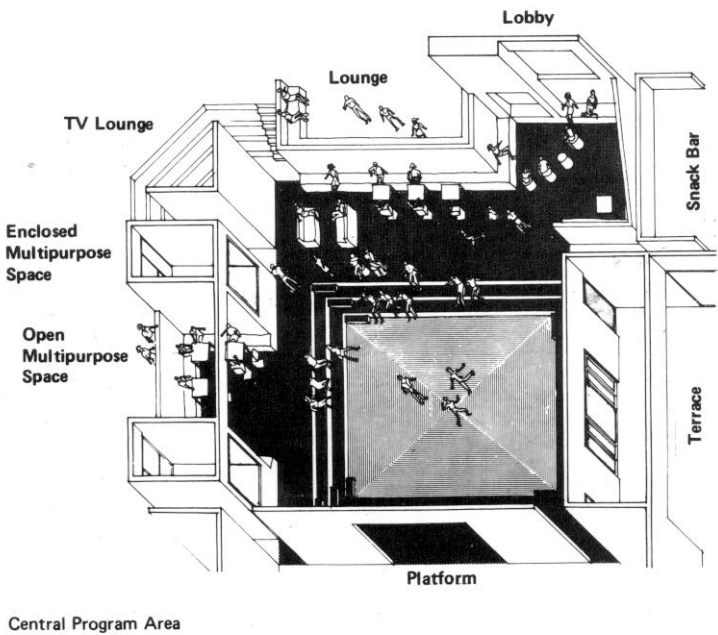
Military Population <sup>1</sup>	Area (Gross SF)
1 - 250	Accommodate in Other Facilities
251 - 500	4,000 (Combine with other recreational facilities where possible)
501 - 2,000	12,700
2,001 - 4,000	19,800
4,001 - 5,000	27,800
5,001 - 10,000	55,600 <sup>2</sup>
10,001 - 15,000	83,400 <sup>2</sup>

<sup>1</sup>Military population is total active duty personnel plus 10% of dependents.

<sup>2</sup>May be provided in more than one facility as long as total maximum allowable area is not exceeded.

Table 7 - 83 Recommended Space Allocation for Recreation Centers

Sub-Space	Size (Gross SF) based on Military Population		
	501-2,000	2,001-4,000	4,001-5,000
Transitional Spaces	180	420	600
Entry Lobby	180	420	600
Large Group Activities	5,520 +	6,660 +	7,680 +
Central Program Area	3,600 +	4,500 +	5,400 +
Platform Area	1,620	1,860	1,980
Pantry	300 +	300 +	300 +
Small Group Activities	4,215	8,450	10,615
Active Games Area	1,790 +	3,240 +	4,545 +
Television Lounge	900 +	1,260 +	1,500 +
Table Games Area	900	900	900
Open Multi-Purpose Area	180	540	720
Enclosed Multi-Purpose Area	180	540	720
Telephone Lounge	120	240	360
Carrels	145	290	430
Special Interest Area	-	1,440	1,440
Administration	1,020	1,510	2,140
Administrative Offices	480	600	930
Information, Tour and Travel	60	130	250
Control Center	480	780	960
Refreshment	1,020	1,980	7,980
Vending Area	1,020	1,980	-
Snack Bar	-	-	4,140
Amusement Centers	-	-	3,840
Service Areas	755	935	1,075
Maintenance	215+	215+	215+
Public Toilets	540	720	860
Total Recreation Center	12,710	19,995	30,085
Total Allowed By DOD	12,700	19,800	27,800
Outdoor Activities	3,200 +	3,850 +	4,500 +
Terrace	3,000	3,600	4,200
Entry Court	200 +	250 +	300 +



a. Large Group Activities

(1) Central Program Area

- (a) *Description.* The central program area houses large group activities such as dance events, festivals, exhibits, game activities, informal entertainment presentations, short films, and TV viewing.
- (b) *Space Allocation.* See Table 7 - 83.
- (c) *Relationships.* The central program area- should be encircled by compatible small group activity areas and should be immediately accessible to the pantry, terrace, eating areas, control center, toilet rooms, and storage area for tables and chairs. It should be remote or acoustically separated from noisy activities such as pool, ping-pong, electric games, combo practice and special interest activities.

(2) Platform and Backstage with Recmobile

- (a) *Description.* The platform provides a focus during large group activities, a place for seating and an activity space for small groups.
- (b) *Space Allocation.* See Table 7 - 84.
- (c) *Relationships.* The platform is the focus point of the central program area and should be located either in the center or in a prominent position visible from all parts of the program area.

Table 7 - 84 Space Allocation for Platform and Backstage with Recmobile

Sub-Space	Size (Gross SF) based on Military Population		
	501-2,000	2,001-4,000	4,001-5,000
Platform	900	900	900
Dressing	240	300	360
Storage	360	540	600
Loading	120	120	120
Total	1,620	1,860	1,980

(3) Pantry

- (a) *Description.* The pantry houses equipment for food preparation and service for large group and individual patrons. Small cooking classes and demonstrations are also held in the pantry.
- (b) *Space Allocation.* See Table 7 - 83.
- (c) *Relationships.* The pantry should be immediately accessible to the central program area. It should be near the administrative offices and the control center.

## b. Small Group Activities

### (1) Active Games Area

(a) *Description.* This area houses games that are physical or noisy such as billiards, pingpong, shuffle board, air hockey, table soccer and electric games. Games are played individually or as part of a tournament program. Provide space for people who are watching or waiting to participate.

(b) *Space Allocation.* See Table 7 - 83.

(c) *Relationships.* Locate the active games area near the control center for equipment distribution and surveillance. Acoustic separation must be provided between noisy and raucous activity spaces and all other function-areas.

### (2) Television Lounge

(a) *Description.* This area houses TV viewing areas. Provide several viewing areas (at least two) throughout the center, in a variety of settings.

(b) *Space Allocation.* See Table 7 - 83.

(c) *Relationships.* The television viewing area should be located away from noisy activities such as billiards, pingpong, electric games, music practice, and special interest.

### (3) Table Games Area

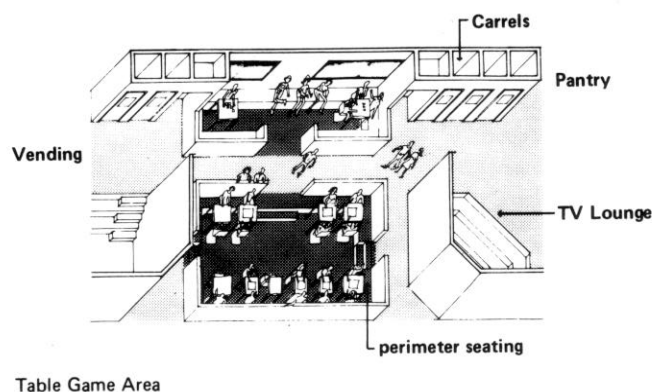
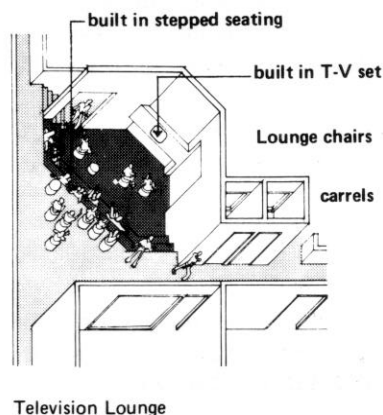
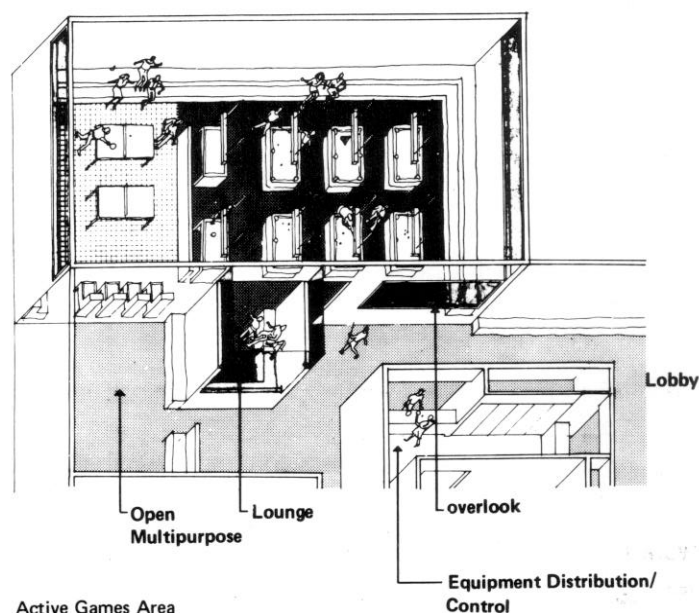
(a) *Description.* These areas house activities such as card games, table games, tournaments, meetings, group discussions, classes, reading, or music and listening. It should be an informal space that encourages participation and observation.

(b) *Space Allocation.* See Table 7 - 85.

(c) *Relationships.* The table games area should be near the pantry and vending area, and remote from noise generating activities such as billiards, pingpong, electric games and music practice. It may act as an extension or overflow space for a snack area.

Table 7 - 85 Space Allocation for Table Games Area

Sub-Space	Size (Gross SF) based on Military Population		
	501-2,000	2,001-4,000	4,001-5,000
Small Games	180	180	180
Large Games	720	720	720
Total	900	900	900



#### (4) Open Multi-Purpose Area

(a) *Description.* This area provides for activities that require work space, such as sewing, newsletter publication, and special projects. Small and large spaces should be provided for different simultaneous activities.

(b) *Space Allocation.* See Table 7 - 83.

(c) *Relationships.* The entrance into the area should encourage casual observation of the activity by patrons in the transition area. It should be located near the staff workroom and the control desk.

#### (5) Enclosed Multi-Purpose Area

(a) *Description.* This area provides space for activities that require acoustical privacy. These include listening to records and tapes, speakers or other presentations, combo practice, group meetings, or private discussions. Small and large multi-purpose areas should be provided for simultaneous activities.

(b) *Space Allocation.* See Table 7 - 83.

(c) *Relationships.* These activities must not interfere with administrative offices or quiet activities such as reading, writing, conversing, or viewing television. However, this space should be near the control center for distribution of instruments.

Since these activities attract onlookers, develop the entries to invite the casual passerby to stand and watch the event before deciding to enter or move on.

#### (6) Telephone Lounge

(a) *Description.* This lounge houses a twenty-four-hour telephone facility for use by all personnel. Activities are generally limited to making calls (both short and prolonged) and waiting for calls.

(b) *Space Allocation.* See Table 7 - 83.

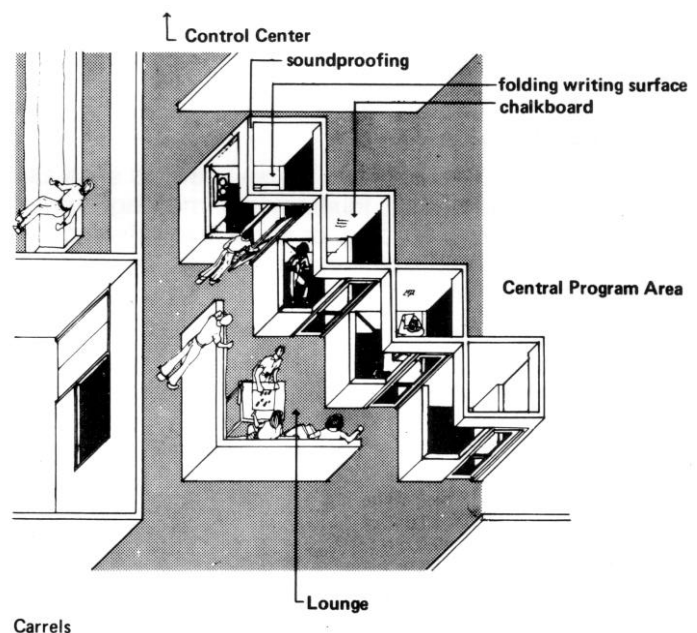
(c) *Relationships.* The telephone lounge should be immediately accessible from the main entrance and the ITT office. The telephone lounge should have exterior access for twenty-four-hour service (secure from the remainder of the facility after hours).

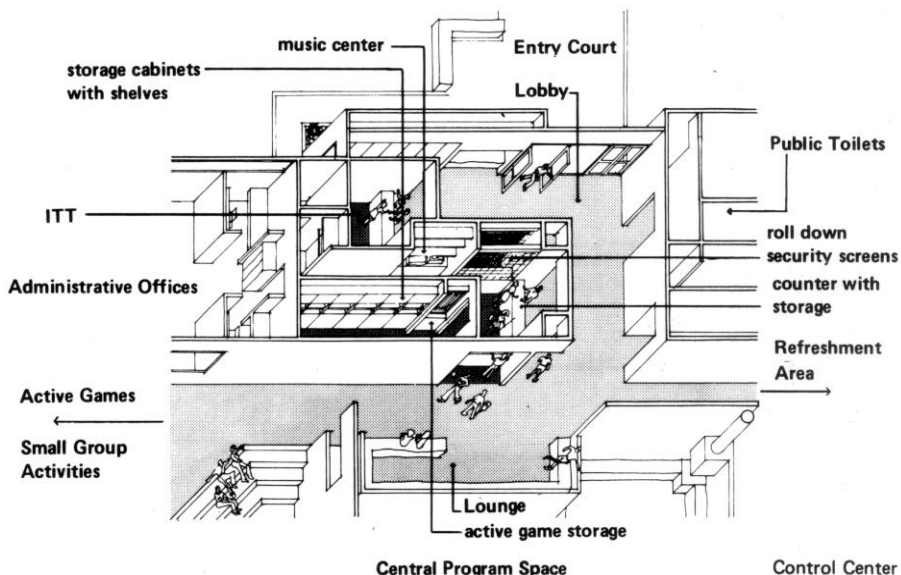
#### (7) Carrels

(a) *Description.* Carrels provide a private environment for reading, writing, music listening, conversing, etc.

(b) *Space Allocation.* See Table 7 - 83.

(c) *Relationships.* Locate carrels to maintain a visual link to the center of the central program area and provide the opportunity to overlook other activities.





## (8) Special Interest Area

(a) *Description.* This space houses special interest programs such as classes, small presentations, clubs, and coffeehouse activities. These may take place at hours when the remainder of the facility is closed, as well as when it is open.

(b) *Space Allocation.* See Table 7 - 86.

(c) *Relationships.* Locate adjacent to, and immediately accessible to the lobby, toilets, and outside. It must be designed to operate independently of the center.

Table 7 - 86 Space Allocation for Special Interest Area  
Size (Gross SF) based on Military Population

Sub-Space	501-2,000	2,001-4,000	4,001-5,000
Meetings	-	1,200	1,200
Office	-	120	120
Storage	-	120	120
Total		1,440	1,440

## c. Administration

### (1) Control Center

(a) *Description.* The control center serves as the general information office, equipment storage and distribution point. From this area the recreation staff maintains visual control over the facility, and operates the P/A system, TV and record/tape systems.

(b) *Space Allocation.* See Table 7 - 83.

(c) *Relationships.* The control center should be adjacent to, and visible from, the entrance lobby and administrative offices. It should be near the central program area, pantry, telephones, activities requiring distribution of equipment, public toilets and janitor's closet.

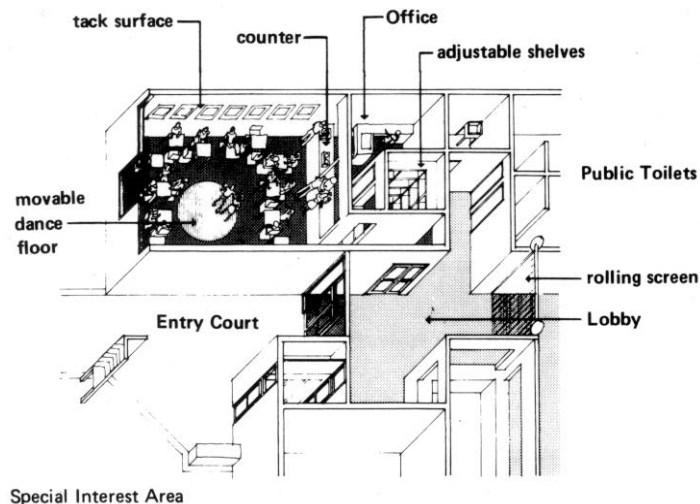


Table 7 - 87 Space Allocation for Administrative Offices

Size (Gross SF) based on Military Population			
Sub-Space	501-2,000	2,001-4,000	4,001-5,000
Office	360	360	600
Meeting	120	120	150
Work	-	120	180
Total	480	600	930

Table 7 - 88 Space Allocation for Information Tour and Travel (ITT)

Size (Gross SF) based on Military Population			
Sub-Space	501-2,000	2,001-4,000	4,001-5,000
Counter	60	60	60
Off ice	-	-	120
Lounge	-	70	70
Total	60	130	250

Table 7 - 89 Space Allocation for Vending Area

Size (Gross SF) based on Military Population			
Sub-Space	501-2,000	2,001-4,000	4,001-5,000
Dining	600	1,290	-
Vending	240	390	-
Games	180	300	-
Total	1,020	1,980	-

**(2) Administrative Offices**

(a) *Description.* The administrative offices provide work and conference space for recreation center staff. The activities include consulting, meeting, lounging, preparing graphics and indirectly monitoring center activities.

(b) *Space Allocation.* See Table 7 - 87.

(c) *Relationships.* The administrative offices should have immediate access to the control center, information tour and travel, and the lobby.

**(3) Information Tour and Travel (ITT)**

(a) *Description.* ITT provides space for ticket dispensing, planning trips, looking at maps, making reservations, viewing projection presentations and conversing in small groups.

(b) *Space Allocation.* See Table 7 - 88.

(c) *Relationships.* All ITT areas should be immediately accessible to the lobby and telephones. In facilities of 12,700 SF or less, ITT is consolidated with the control center.

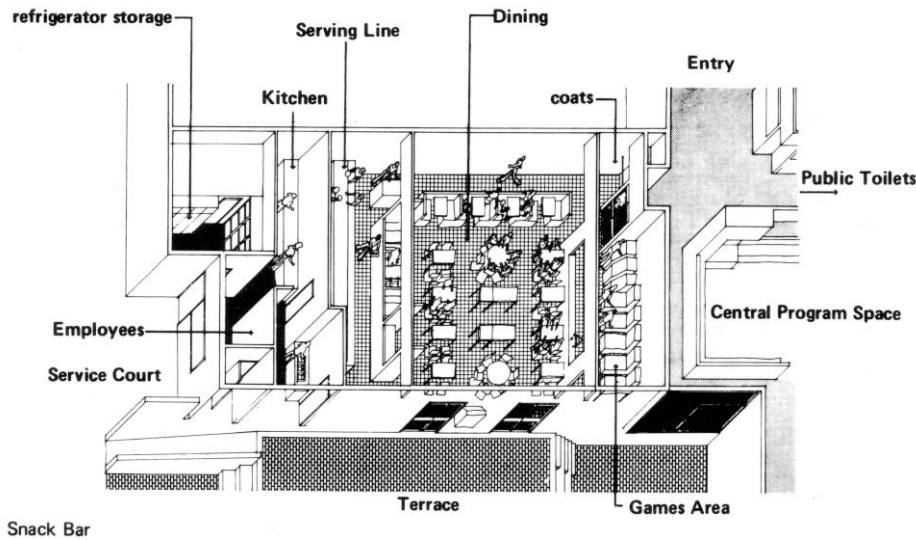
**d. Refreshment Activities****(1) Vending Area**

(a) *Description.* This area provides space for vending machines, electric games that are operated by AAFES, and a few snack tables.

(b) *Space Allocation.* See Table 7 - 89.

(c) *Relationships.* The vending area should be located near the lobby, separate from but visually connected to other recreation center areas. The area should be visible and directly accessible from the central program area.





## (2) Snack Bar

(a) *Description.* Provide a snack bar with full food service, if there are no other permanent exchange facilities available in the immediate area. Activities include preparation of food, dining, and playing electrically operated games.

(b) *Space Allocation.* See Table 7 - 90.

(c) *Relationships.* The snack bar should be immediately accessible from the lobby. It should be possible to lock other areas so that the snack bar can operate when the rest of the center is closed. The AAFES game area should be adjacent to the snack bar area.

Table 7 - 90 Space Allocation for Snack Bar

Sub-Space	Size (Gross SF) based on Military Population		
	501-2,000	2,001-4,000	4,001-5,000
Dining	-	-	1,680
Serving	-	-	840
Kitchen	-	-	1,200
Games	-	-	420
Total	-	-	4,140

## (3) Amusement Centers

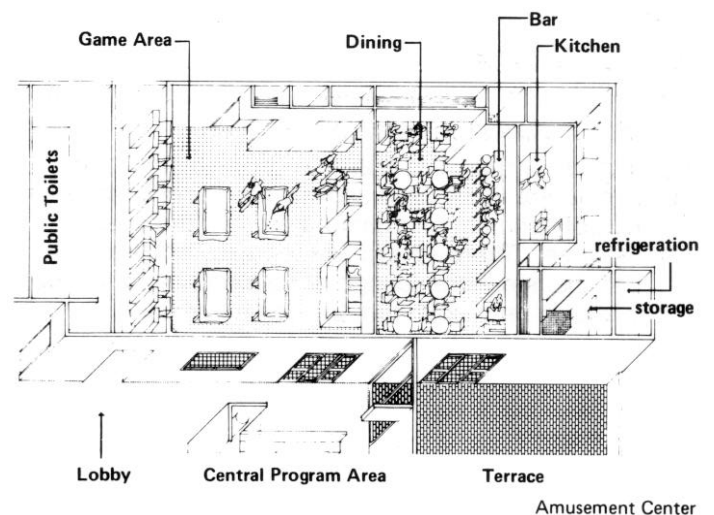
(a) *Description.* Amusement centers provide a large area for coin operated skill and pinball machines, and a limited food service (primarily pizza and beer).

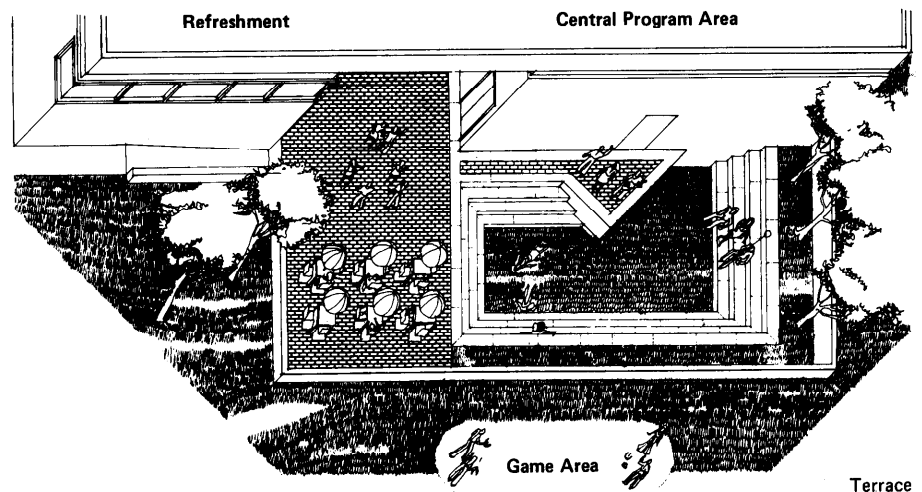
(b) *Space Allocation.* See Table 7 - 91.

(c) *Relationships.* The amusement center should be immediately accessible from the lobby and terrace. Toilet rooms should be nearby. All other areas should be secured from the amusement center after the recreation center closes. Locate the amusement center away from the active game area.

Table 7 - 91 Space Allocation for Amusement Centers

Sub-Space	Size (Gross SF) based on Military Population		
	501-2,000	2,001-4,000	4,001-5,000
Game Area	-	-	1,800
Dining Area	-	-	1,200
Preparation	-	-	840
Total			3,840





## e. Transition and Service Areas

### (1) Entry/Lobby

(a) *Description.* The entry/lobby serves as a controlled entrance and exit for the center. The entrance can also be used to display information about current activities and orient visitors to the plan of the center.

(b) *Space Allocation.* See Table 7 - 83.

(c) *Relationships.* The lobby should be adjacent to and visible from the control desk and ITT. Provide easy access to AAFES snack bar and vending area or amusement center, special interest area, public toilets, and telephone lounge.

### (2) Maintenance Areas

(a) *Description.* Activities in this area include delivery of supplies and equipment, removal of trash, maintenance of plumbing, mechanical equipment, parking and landscaping.

(b) *Space Allocation.* See Table 7 - 83.

(c) *Relationships.* Utilities should be located near the kitchen loading areas and the common driveway, to centralize service-related activities. Trash removal for the various activities should occur at the appropriate loading area.

### (3) Public Toilets

(a) *Description.* These toilets serve visitors and staff.

(b) *Space Allocation.* See Table 7 - 83.

(c) *Relationships.* The public toilet area should be adjacent to the lobby area and near the control center, AAFES refreshment and game area, and the special interest area. There should also be easy access from ITT and the telephone lounge. The entrance to the toilet areas should be visible from the control center.

## f. Outdoor Activities

### (1) Terrace

(a) *Description.* The terrace provides space for barbecuing, presentations, horseshoes, shuffleboard, dancing, etc. The space may be subdivided to simultaneously accommodate activities.

(b) *Space Allocation.* See Table 7 - 83.

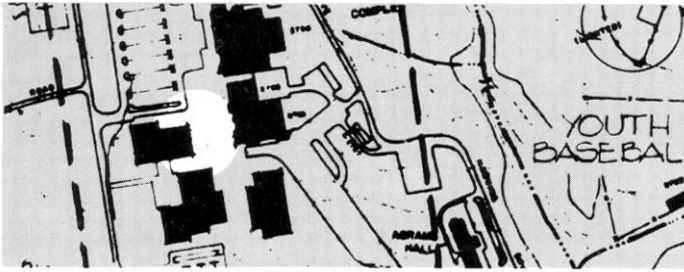
(c) *Relationships.* The terrace should be located adjacent to the central program area and the refreshment area. It should also be near the pantry in order to prepare food for barbecues. Terraces should be oriented to take advantage of the sun and natural shade.

### (2) Entry Court

(a) *Description.* The entry court serves as a visual focus for the center, and a place to gather informally when entering or leaving the building.

(b) *Space Allocation.* See Table 7 - 83.

(c) *Relationships.* The entry court should be connected to pedestrian circulation, the parking lot, and a drop-off area. In severe climates, consider providing a covered access to the drop-off area. The entry court should lead to the building entry and telephone lounge.



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## Restaurants

Table 7 - 93 DOD Space Authorization for Installation Restaurants

Number of Civilian Employees	Area (Gross SF)
1 - 500	None
501 - 700	4,900
701 - 1,000	8,700
1,001 - 1,500	12,000
1,501 - 2,000	15,700
2,001 - 2,500	19,200
2,501 - 3,000	22,800
3,001 - 3,500	27,000
3,501 - 4,000	30,500
4,001 - 4,500	33,900
Over 4,500	37,000

If adequate food service facilities are not available for a significant number of civilian employees, an installation restaurant may be established. Installation restaurants normally are not established where the number of civilians to be served is less than 500. However, consideration should be given to providing snack bar and/or vending machine service. If it is necessary to provide service for more than 5,000 employees, two or more restaurants may be provided as determined by an appropriate economic study. Space allowances for installation restaurants are shown in Table 7 - 93.

Where installation restaurants are provided, they should be integrated into the Community Activity Center - either located together in a complex or consolidated in a single structure with other retail and MSA services. The restaurant function is supportive and interactive with the other CAC activities. This may involve location in Main Post or Local Centers, convenient for the civilian user population. This organization should emphasize the integration of the civilian employee population into the whole post community.

7 - 28

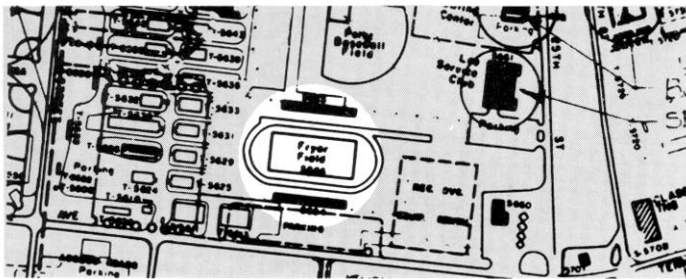
Roller/Ice Skating Rinks

A roller/ice skating rink requires a hard-surface floor with a potential for multipurpose use. The facility may include administrative space, maintenance, equipment storage, snack bar, kitchen space, locker and spectator areas.



Table 7 - 94 DOD Space Authorization for Roller/Ice Skating Rinks

<u>Military</u>	<u>Population</u>	<u>Gross SF (not including mechanical room space)</u>
	0- 2,000	10,000 (plus additional space for support functions)
	2,001 - 20,000	15,000 (including support functions)
	over 20,001	20,000 (including support functions)



7 - 29

## Stadiums

Table 7 - 95 DOD Space Authorization for Stadiums

<u>Military Strength</u>	<u>Seating Capacity</u>
over 10,000	maximum one-third of installation military strength

At installations with a military strength over 10,000, a stadium with a seating capacity not to exceed one-third of the installation military strength may be provided. In addition, a separate regulation baseball field, with bleachers of seating capacity not to exceed one-third of the installation military strength, may be provided. Both the stadium and the baseball field may be lighted for night play. While the function of these facilities may be related to physical fitness centers, their large population access and parking requirements will probably determine their own separate location.

# Theatres

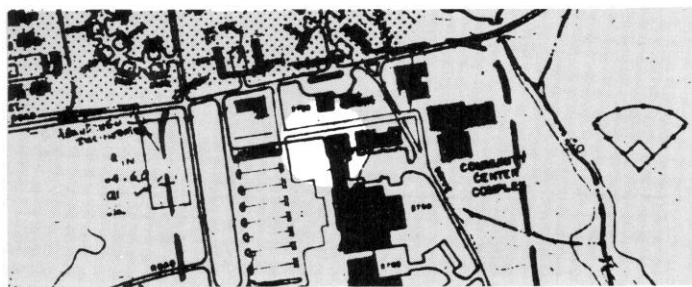
Theatres are primarily used for screening movies and are typically separate from MSA entertainment operations, although shared space usage may be considered. However, their location and operation should be coordinated with MSA, and other leisure and entertainment programs, for convenient sharing of support facilities such as snack bars and parking, and for mutual attraction and exposure benefits. The access and parking requirements of theatres places heavy demands on vehicular movement patterns, but may provide complementary sharing potentials with other recreational and retail facilities. Integration into Main Post Community Activity Centers is recommended.

<u>Military Strength</u> <sup>1</sup>	<u>Number and Capacity of Theatres</u> <sup>2</sup>
1 - 300	Accommodate in other facilities
301 - 1,000	1, General purpose facility
1,001 - 2,000	1, 350-seat with dressing rooms
2,001 - 3,000	1, 550-seat with dressing rooms
3,001 - 7,000	1, 1000-seat with dressing rooms
7,001 - 10,000	1, 1000-seat with dressing rooms and
	1, 500-seat with dressing rooms
10,001 - 15,000	1, 1000-seat with dressing rooms and
	2, 500-seat with dressing rooms
15,001 - 20,000	1, 1000-seat with dressing rooms and
	3, 500-seat with dressing rooms
20,001 - 25,000	1, 1000-seat with dressing rooms;
	1, 1000-seat with dressing rooms, and
	2, 500-seat with dressing rooms

Military strength includes active duty plus 50% of dependents.

<sup>2</sup>All facilities listed will be provided with a stage.

<u>Theatre Capacity</u>	<u>Area (Gross SF)</u>	
	<u>With Dressing Rooms</u>	<u>Without Dressing Rooms</u>
General purpose facility	3,500	3,500
350 seats	6,500	5,800
500 seats	10,900	9,600
1,000 seats	17,200	15,500



## 7-31

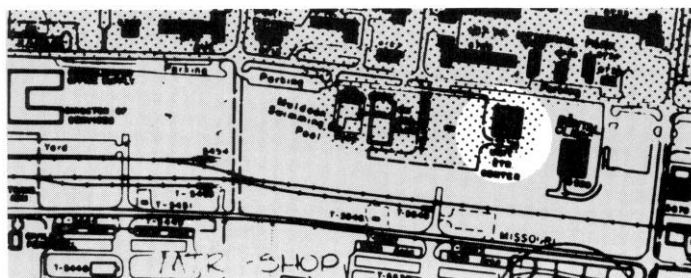
### Thrift Shops

Table 7 - 98 DOD Space Authorization for Thrift Shops

Military Strength	Area (Gross SF) <sup>1</sup>
1 - 2,000	1,400
2,001 - 4,000	2,000
4,001 - 6,000	2,700
6,001 - 8,000	3,400
8,001 - 10,000	4,000
10,001 - 12,000	4,500
12,001 - 14,000	4,905
Over 14,000	5,350

<sup>1</sup> Environmental adjustment factors to be applied to the authorized space allowances for installations with military strength over 2,000 are found in DOD 4270.1-M.

Thrift shops may be established in order to provide a non-profit facility for the sale and purchase of used apparel, household furniture, furnishings, and equipment. Their location should be integrated in a Community Activity Center, just as other retail and service operations are.



## 7-32

### Unit Entertainment Centers

Table 7 - 99 DOD Space Authorization for Unit Entertainment Centers

Unit Military Strength	Area (Gross SF)
850	3,500
3,000	9,000

Unit entertainment centers are intended to provide facilities for the organization, preparation and performance of unit-oriented entertainment activities. They should include practice rooms, offices, equipment check-out and repair areas, technical shops, and an auditorium with stage and seating. The provision of facilities shall be based upon the number and disposition of units on the particular installation. Authorized space allowances are found in Table 7 - 99. However, this facility is provided only when it has been conclusively demonstrated that there is no existing facility that can meet the requirement on a joint use basis. Siting of unit entertainment centers should provide for maximum convenience to unit personnel, preferably within or adjacent to the barracks complex or billeting area.

7 - 33

Youth Centers  
DG 1110-3-138

The youth activities program performs a morale support function by providing a comprehensive system of activities designed to meet the social, cultural, and recreational needs of children and young military dependents; to encourage their constructive use of leisure-time; to develop their leadership abilities and self-reliance; and to develop traits of responsible citizens. This important service is not otherwise available on the installation, and is typically inadequately served by activity programs (e.g., city and county recreation programs, Y's, community schools, etc.) in surrounding civilian communities.

The youth activities program serves military dependents 6 through 19 years of age. The program should provide for the full range of users whose composition, subgroupings, and interests, will vary from post to post. The activities offered at each installation will vary depending on local preferences, geographic and climatic conditions, available staff and facilities, and other local considerations.

The basic decision involved in the planning of youth activities facilities is whether the installation should have a centralized or a decentralized system. A centralized system would have one main youth center serving the entire post. A decentralized system would have a set of youth centers, with one main center serving the entire post for the activities that warrant a central location, and neighborhood centers located to serve geographical subgroups of the post population. Other factors to be considered in youth activities planning include: general installation layout, location of existing buildings and sport fields, availability of building sites, geographic barriers, needs of user population, and distribution of off-post youth population.

The major functional areas of youth centers include a drop-in module, programmed space module, large space module, administration and support module, and outdoor module.

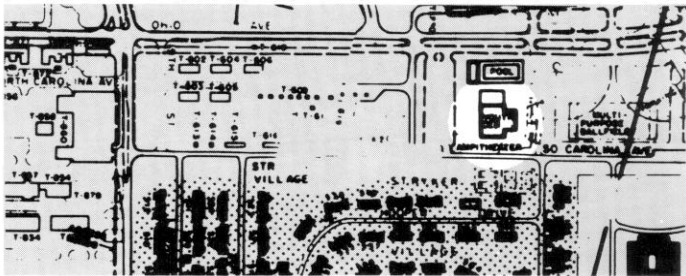


Table 7 - 100 DOD Space Authorization for Youth Centers

Youth Population <sup>1</sup>	Area (Gross SF)
1 - 250	Accommodate in other facilities
251 - 600	6,700
601 - 1,200	9,000
1,201 - 2,400	11,340
2,401 - 4,800 <sup>2</sup>	18,500

<sup>1</sup>Youth population shall be established by determining the school enrollment of active duty military and authorized civilian employee dependent youth ages 6 to 19 in local school districts, on or off post.

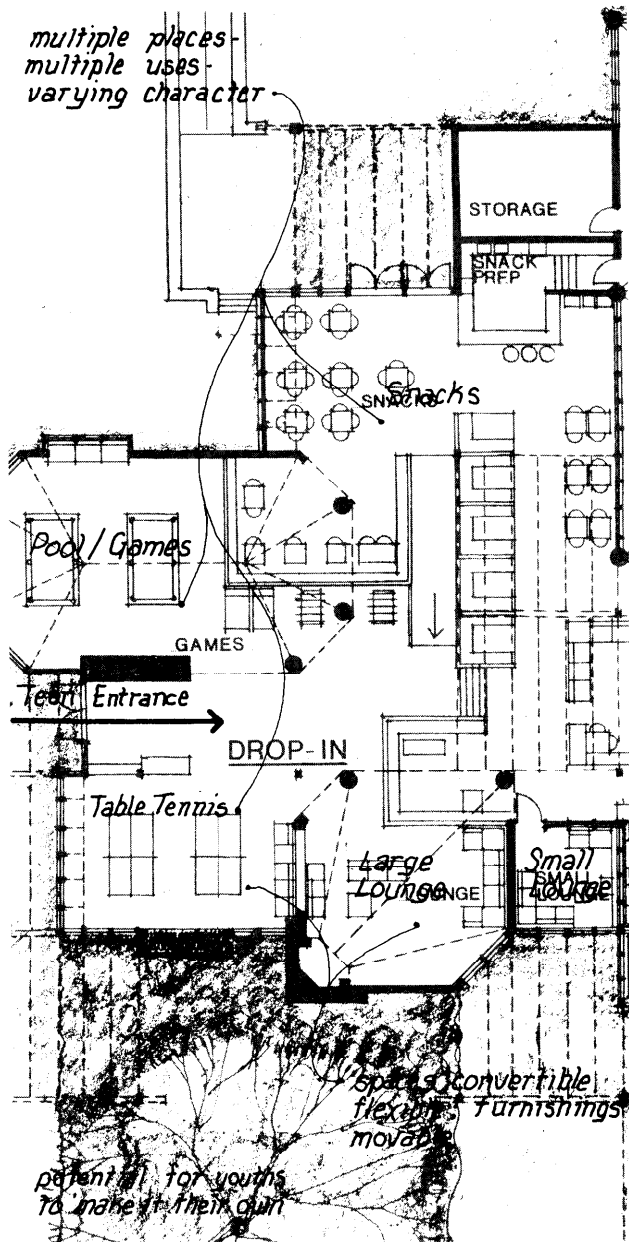
<sup>2</sup>For each increment of 2,400 eligible dependent youth population above 4,800, an additional 9,240 square feet may be provided.



Table 7 - 101 Recommended Space Allocation for Youth Centers

Sub-space	Size (Gross SF) based on Youth Population				Neighborhood	
	Main					
	251-600	601-1200	1201-2400	2401+	251-600	601 +
Drop-in Module	930	1,730	2,350	3,650	1,150	1,920
Game Room	330	575	800	1,350	550	800
Lounges	400	675	850	1,150	400	700
Snack Facilities	200	480	700	1,150	200	420
Programmed Spaces Module	670	1,020	1,350	2,450	670	1,020
Meeting Spaces	340	680	820	1,400	340	680
Projects Space	330	340	530	1,050	330	340
Large Space Module	1,760	2,550	4,780	7,150		
Large Activity Space	1,600	2,300	4,300	6,400	-	-
Storage	160	250	480	750	-	-
Administration and Support Module	1,510	2,240	3,310	6,000	1,120	1,320
Entry and Circulation	740	1,050	1,600	3,300	550	700
Supervision and Administration Spaces	250	300	400	600	100	100
Toilets and Lockers	300	480	720	1,190	300	300
General Storage	200	390	550	850	150	200
Maintenance	20	20	40	60	20	20
Mechanical Room*	(350)	(500)	(650)	(800)	(150)	(300)
Total	4,870	7,540	11,790	19,250	2,940	4,260
Outdoor Module *	5,600	6,700	8,300	11,000	3,400	4,500
Outdoor Activity Spaces *	5,000	6,000	7,500	10,000	3,000	4,000
Entry Space *	600	700	800	1,000	400	500

\*Not included in Center allocation totals or authorized square footage.



Drop-in Considerations

## a. Drop-in Module

### (1) Game Room

(a) *Description.* The game room will mainly be used for active, moderately noisy sports like table tennis, billiards, and electronic game machines. Board games may also be played here. Space should also be provided for observing, waiting and lounging. This space should be convertible for large group activities, such as dances, dramatic presentations, large meetings, or for additional lounge space. To provide this flexibility, large amounts of storage space are required.

(b) *Space Allocation.* See Table 7 - 101.

(c) *Relationships.* The game space must be directly accessible to, and visible from, the entry, as well as the circulation area and the supervisor's desk. It would also be desirable to have access and visibility to the game room from the lounge spaces (to combine them for various large functions), the snack facilities and an outdoor activity space. The game space must be able to be isolated acoustically from one of the lounges, and from other major functions such as programmed and large activity spaces.

### (2) Lounges

(a) *Description.* Both large and small lounges should be provided. The large lounge will be used primarily for socializing, conversation groups, small meetings, table games, snacking, small dances, music listening, or for a large group watching special events or television.

The small lounge will be for a single conversation group, a few people watching television, or solitary activities such as reading. Some part of the lounges should always be available for quiet activities like studying, reading, intense conversations, and individual use of video or audio tape cassettes. The small lounge can be made a part of the lobby, game or snack space, so long as it is acoustically isolated from the large lounge.

(b) *Space Allocation.* See Table 7 - 102.

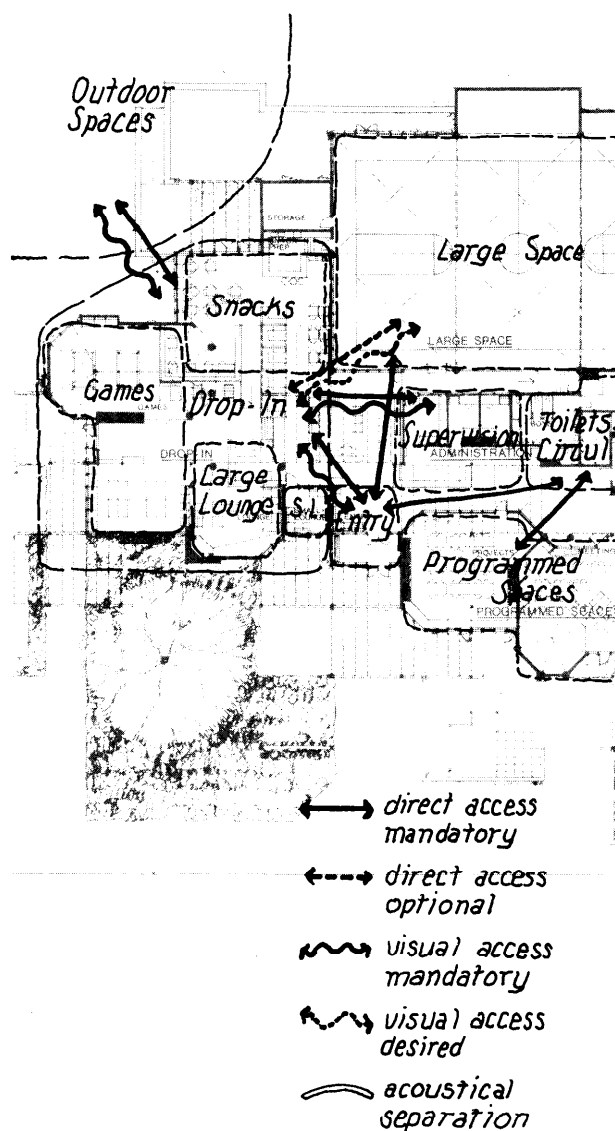
(c) *Relationships.* The large and small lounges should be directly accessible from the entry, and a major portion should be visible from the entry and the supervisor's desk. The large lounge must also be directly accessible to, and have views of, an outdoor activity space and snack facilities. Ideally, the lounges should also have access and visibility directly to the game room or large activity space, to act as extensions of these spaces and have easy access to the toilets. The most important acoustical separation is to permit one of the lounges to be isolated and quiet while there is noise elsewhere in the building.

### (3) Snack Facilities

(a) *Description.* Snack service should be scheduled for those hours when the center is open as a drop-in facility (generally after school, evenings and weekends). The food preparation area will be manned by part-time staff, teenagers, or volunteers. The food storage areas should be lockable. This area should be supplemented by 2 to 4 vending machines for soft drinks, candy, and package foods. The snack preparation area can occasionally be used as a pantry for catering of large groups for light meals, to be served in the large lounge or activity space, and for cooking classes and clubs.

(b) *Space Allocation.* See Table 7 - 101.

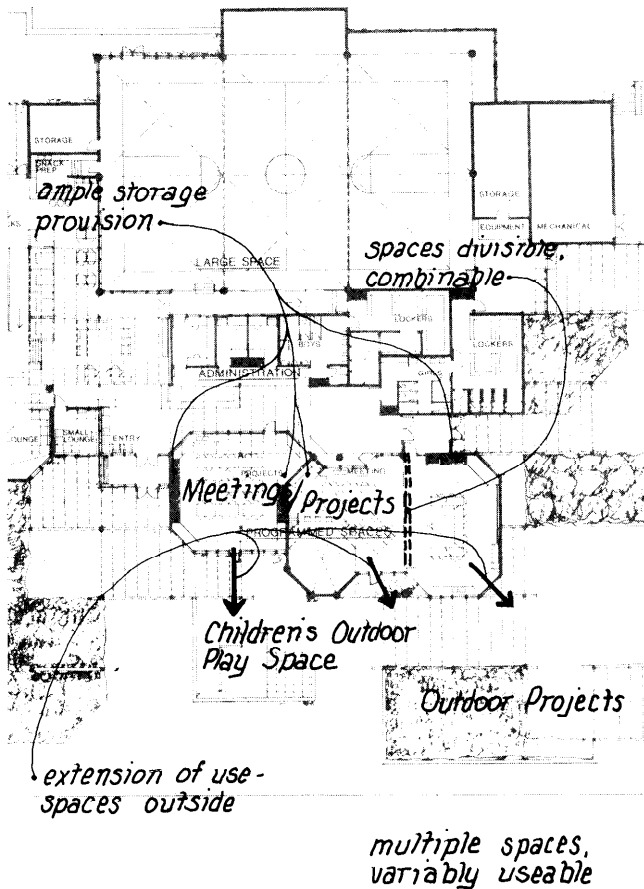
(c) *Relationships.* The snack bar must be visible and readily accessible from the entry, as one of the inviting, easy-to-join activity spaces for newcomers. It should also have good access and visibility from the game room, small lounge, and supervision desk. The snack preparation area must be adjacent to the eating area, which may overlap with the lounge spaces. It should also have direct access to the large activity space for use as a serving pantry for parties and banquets.



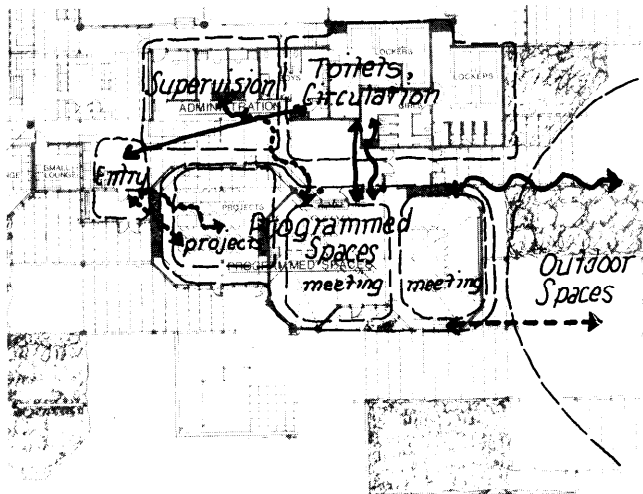
Drop-in Relationships

Table 7 - 102 Space Allocation for Lounges

Sub-space	Size (Gross SF) based on Youth Population				Neighborhood	
	Main					
	251-600	601-1200	1201-2400	2401+	251-600	601+
Large Lounge	250	450	600	900	250	500
Storage	50	75	100	100	50	50
Small Lounge	100	150	150	150	100	150
Total	400	675	850	1,150	400	700



### Programmed Spaces Considerations



### Programmed Spaces Relationships

## b. Programmed Spaces Module

### (1) Meeting Spaces

(a) *Description.* The meeting spaces will be used primarily for scheduled group activities, clubs and meetings, classes, dances/music/gymnastics instruction and practice, and supervised free play for children. The meeting spaces should also accommodate overflow of activities such as crafts, team organization meetings, or watching special events on television. Also, because these spaces can be secured, they can be used for dressing areas for dramatic groups, rehearsal areas for plays and performances, or places where scenery and equipment might be assembled and stored for a short time.

(b) *Space Allocation.* See Table 7 - 102.

(c) *Relationships.* The meeting spaces should be reached indirectly from most other spaces in the center. However, they must have direct access to the general storage, toilet areas, locker rooms, entry, and supervision space. Controlling access to these spaces by direct visual supervision is important. Where two meeting rooms are provided, they must be acoustically isolated from the rest of the center and from each other.

### (2) Projects Space

(a) *Description.* The projects space has two primary uses, a place for instruction and a place for individual projects. The projects room should house only small projects and be equipped with light tools. For heavier work, youth activities is expected to utilize other Morale Support Activities facilities.

(b) *Space Allocation.* See Table 7 - 101.

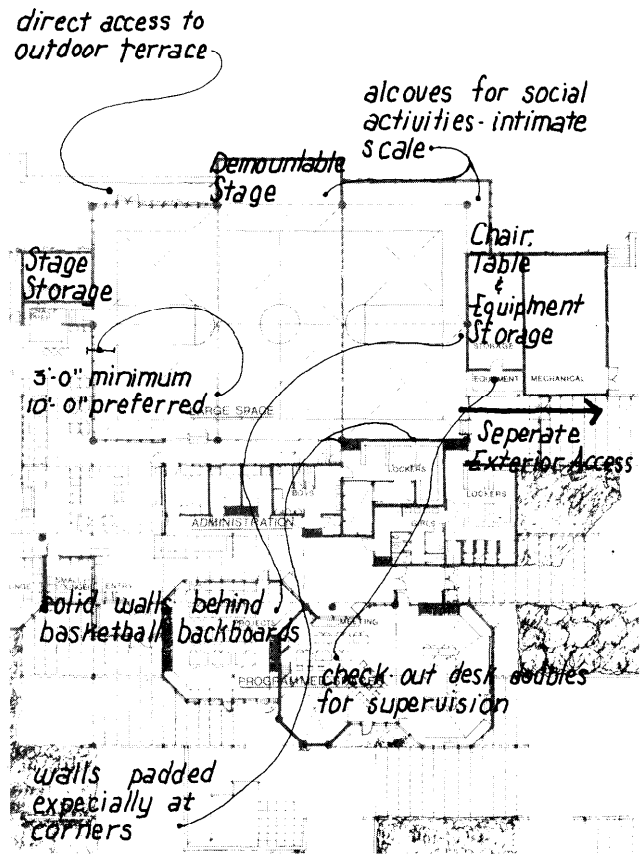
(c) *Relationships.* The projects room must be acoustically separated from the other spaces in the center, and have access to the general storage and toilet facilities (at least through a common circulation area). Its products and activity should be visible to other visitors and users of the facility, its hours of use could be lengthened if it were supervised by outside control. It should also have access to outdoor space for larger projects.

### c. Large Space Module

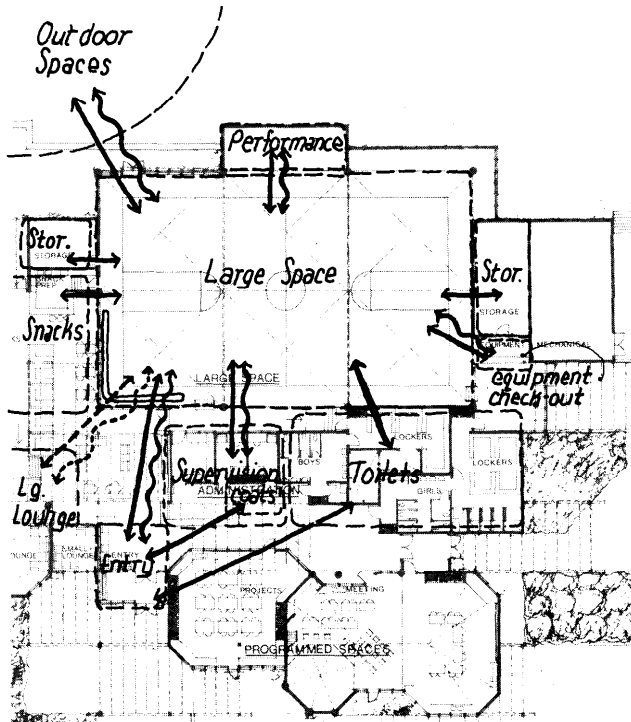
(1) *Description.* The large space module consists of the large activity space, with subspaces such as a stage/platform area, alcoves, and storage. The large space module is included in the program for main youth centers, not neighborhood centers. Some of the activities would take place in neighborhood centers on a smaller scale, but would be housed in the programmed and drop-in spaces. Large and accessible storage for all the functions is necessary for flexible use of the space, particularly for large athletic equipment, stacking chairs, tables, etc.

(2) *Space Allocation.* See Table 7 - 101.

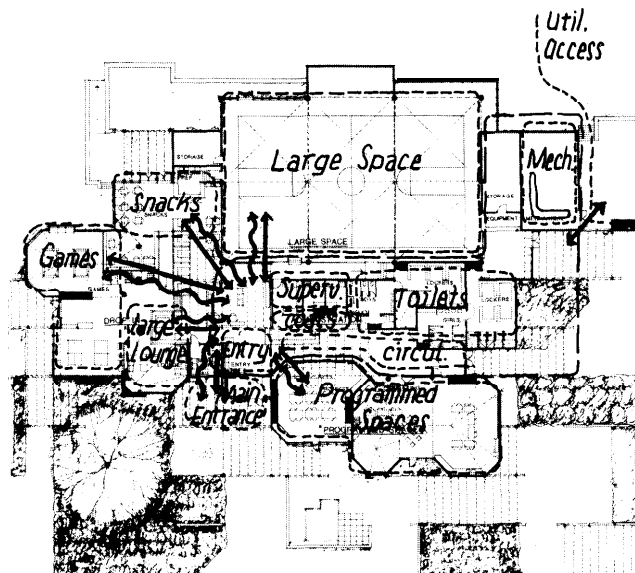
(3) *Relationships.* The large space should be directly accessible from the main entrance lobby, especially during evening functions when the rest of the building may not be in use. Restrooms, coat room, and snack preparation area should also be readily accessible, as should service access for catering and for table and chair storage. Provide convenient exterior access to playing fields and to patio terraces. Visual contact between the entry and drop-in center, and the large activity space, is desirable for spectators and supervisors. The large activity space must also be acoustically separate from other areas of the youth center.



Large Space Considerations



Large Space Relationships



Administration and Support Relationships

## d. Administration and Support Module

### (1) Entry

(a) *Description.* The entry should be pleasant to be in while waiting for friends to arrive, should orient the new arrival to the various activities of the center, and should be a comfortable place for casual meetings and interactions. It should also accommodate bulletin boards, information kiosks and display cases, for display of trophies or projects and posting information.

(b) *Space Allocation.* See Table 7 - 103.

(c) *Relationships.* The entry should have direct access to most of the center activities, even in the largest centers, and provide good visibility into the activities of most of these spaces. The inside of the entry should be visible to approaching center visitors and users.

### (2) Circulation

(a) *Description.* Traffic flows to all activities within the center should be efficient and easy for the visitors to understand. Along the circulation routes, there should be occasional places to gather, particularly near the entry into different modules, to encourage interaction among users.

(b) *Space Allocation.* See Table 7 - 103.

(c) *Relationships.* Access to activities connected by circulation spaces are covered under the activity headings. The hallway to programmed spaces should have a door which can serve as an acoustical barrier and be locked while the drop-in or large space module is being used and the programmed spaces are closed.

Table 7 - 103 Space Allocation for Entry and Circulation

Sub-space	Size (Gross SF) based on Youth Population					
	Main				Neighborhood	
	250-600	601-1200	1201-2400	2401+	250-600	601+
Entry	240	300	500	800	550	700
Circulation	500	750	1,100	2,500		
Total	740	1,050	1,600	3,300	550	700

### (3) Supervision and Administration Spaces

(a) *Description.* From a central point of the youth center, one staff person should be able to supervise most center activities and perform administrative tasks such as record keeping, answering the phone, and holding small conferences. Also, youth counseling, information and employment services should operate in this space, as should sign-ups for general youth activities, check-in, identification checking and ticket-taking for dances and performances. In larger centers, the supervision space might be used as a disco booth.

(b) *Space Allocation.* See Table 7 - 101.

(c) *Relationships.* The administration and supervision spaces should permit visual surveillance of a significant percentage of all the activity spaces. Particularly important is direct access and visibility from the entry and central circulation area. The administration office should allow visual and acoustic isolation when required.

### (4) Toilets and Lockers

(a) *Description.* Toilets and lockers must serve children, adults and groups changing for sports or performances. There should also be showers in larger youth centers.

(b) *Space Allocation.* See Table 7 - 104.

(c) *Relationships.* The entrances to the boys' and girls' toilets should be separated by as much distance as practicable, and the entrances should be reasonably near to and preferably visible from the supervision desk so that there is some sense of supervision. The toilets should be accessible from the entry or nearby circulation spaces. There should also be a direct connection from the large activity space to the toilets and changing rooms, and reasonably close access from the programmed spaces.

### (5) Storage

(a) *Description.* The center needs a large volume of storage because of the diverse functions. Most storage should be adjacent to the space or module in which the stored materials will be used. However, general storage can accommodate the overflow. General storage is needed also to store supplies for special occasions, such as barbecues or parades. If possible, a separate coat-room under supervision should be provide for safe storage of all users' coats.

(b) *Space Allocation.* See Table 7 - 101.

(c) *Relationships.* General storage and coat storage should be located near the staff office, but should be accessible from the circulation space. Other storage should be directly accessible from the space served.

### (6) Maintenance and Mechanical Spaces

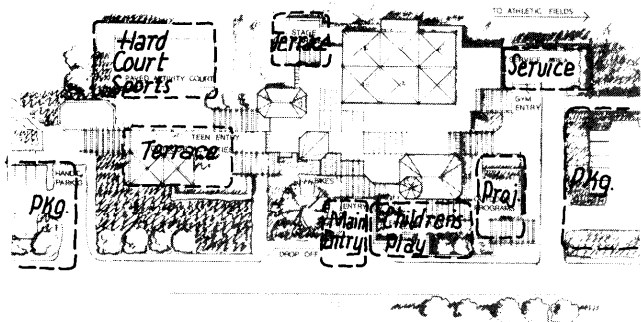
(a) *Description.* Two types of space should be available for maintaining and servicing the building, a maintenance closet and a mechanical room for environmental control equipment.

(b) *Space Allocation.* See Table 7 - 101.

(c) *Relationships.* The maintenance closet should be adjacent to the toilet rooms. The mechanical room must be accessible from the outside only (use will be by facility engineers).

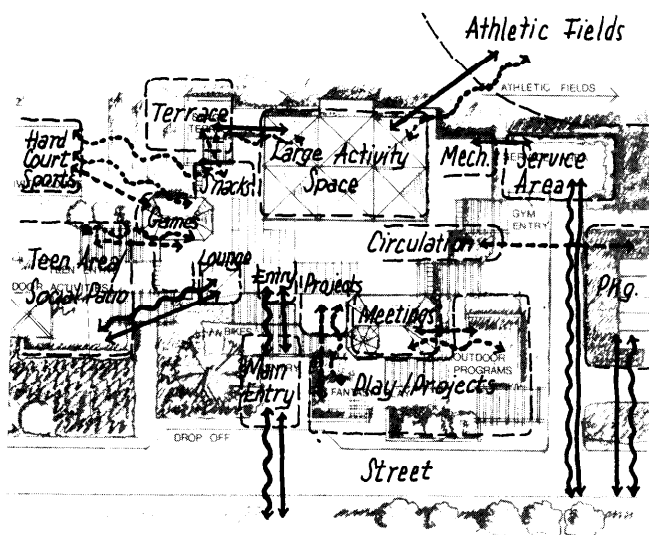
Table 7 – 104 Space Allocation for Toilets and Lockers

Sub-space	Size (Gross SF) based on Youth Population				Neighborhood	
	Main					
	250-600	601-1200	1201-2400	2401 +	250-600	601 +
Men's Toilets & Changing Rooms	150	240	290	480	-	-
Men's Showers	0	0	70	140	-	-
Women's Toilets & Changing Rooms	150	240	300	440	-	-
Women's Showers	0	0	60	130	-	-
Total	300	480	720	1,190	-	-



multiple spaces for  
different uses

### Outdoor Module Spaces



### Outdoor Module Relationships

## e. Outdoor Module

### (1) Outdoor Activity Spaces

(a) *Description.* The outdoor activity spaces include four different types of areas, accommodating four basic functions. A hard-surface area for outdoor sports (basketball, badminton, and racquetball) and occasional social activities (picnics and dances). Patio terraces for social activities such as conversation, parties, hanging out, extensions of indoor lounging and snacking. Outdoor projects spaces that extend the indoor programmed spaces for meeting, crafts, gardening, clubs and scouts. As well as children's play areas that also extend the interior activities of the programmed spaces with active, imaginative, adventurous playground experiences for juveniles.

(b) *Space Allocation.* See Table 7 - 101.

(c) *Relationships.* Each outdoor activity area should have direct access from the corresponding interior activity-space. The outdoor sports court and patios should relate directly to the drop-in area and the teen users, and should be accessible from the large space with its sports and social functions. The outdoor children's play and project spaces should cluster near the programmed spaces module. The various activity spaces should be screened by walls and shrubs for space definition and privacy, they should also be partly visible to passers-by.

### (2) Entry Space

(a) *Description.* The entry space should facilitate pedestrian access and aid visitors in learning about the youth center. The area should be large enough for waiting and socializing.

(b) *Space Allocation.* See Table 7 - 101.

(c) *Relationships.* The entry space should be visible and recognizable from the street or driveway. Direct paths, accessible for wheelchairs, should lead from a drop-off area at the street and from the parking areas. From the outdoor entry space, activities in the entry and lounges of the building should be visible. The entrance path should be visible from the entry and supervisor's area.